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Teaching Profession and Teacher Preparation: Gearing up to the Emerging Challenges

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Overcoming High Expenses of Higher Education

GMOHAN

The Power of the Indian Mind

–Convocation Address

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Association of Indian Universities

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IN THIS ISSUE

Teaching Profession and Teacher Preparation: Gearing up to the Emerging Challenges

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Within the context of globalization, as geographical space gets compressed, borders between the nations blur, as goods and services move freely from one corner of the globe to another to usher in an era of economic prosperity and social transformation, it is education that can catalyze this process to bring about the desired changes within individual nations and societies. As developed countries have begun to take a giant leap into the competitive world market, the developing countries, on the contrary, are at a snail's pace to make a mark in the same. In such an event, it is undoubtedly education that will make the difference between those who will prosper in the new economy and those who will be left behind. It is simply not just education, but education of high standard and excellence, which matters most for the participating country to reap the maximum benefits of globalization. However, it is to be noted that not only the standard or quality of education differs from country to country across the globe, but also the level of educational development, which makes it difficult for many countries, especially in the third world region to be a viable partner in the international economy. In this context, although India seems to have competitive edge in the global market in terms of higher education and skilled manpower particularly in IT sector, the failure to realize the goal of universal primary education, poor quality of education across different stages pose formidable challenges and threat to the progress of the economy. This is further compounded by persisting urban-rural, male-female, inter-and intra-regional disparities, which require immediate attention.

Although, historical, social and cultural conditions are identified as root cause for persisting disparities in the Indian context, the fact remains that the poor quality of education that prevails in different contexts is even more a stronger reason for disparities to persist over the years. More importantly, one could also identify certain determinants of poor quality of education to that of poor quality of classroom teaching, which in turn is related to the quality of teacher training/ education. In the context of planning education for development, it has been pointed out nearly 40 years ago that attempts to change the quality of learning in schools should necessarily be linked to improvements in education of teachers (Beeby, 1966). Thus Teacher Education appears to be an important contributory factor for persistence of substandard education at different levels and across types in many parts of the world. The present paper takes a critical look at the current Teacher Education system in India and discusses certain, implications for the teaching profession and teacher preparation

in the context of emerging challenges and diverse educational contexts.

What ails the Teacher Education System?

Teacher Education has long been considered weak among higher education degree programs, one that lacks high standards and strong contacts with the field. Unlike the professional higher education courses meant for doctors, engineers, lawyers, the professional education course for teachers is often found to be not only short in duration, but also very limited in exposing the teacher trainees to the practical realities of classroom teaching in varied school contexts. In this regard, critics point out that the Teacher Education course lacks both academic rigour and professionalism that is often seen in other professions such as medical, engineering or legal. They further argue that unlike a doctor who is not allowed to operate until he or she specializes in surgery and acquires sufficient competence and skills, a teacher on the contrary becomes eligible to handle classroom teaching barely after an year or two of training, which in most cases, doesn't equip the trainee to deal with grassroots realities of school education in the Indian context. As a result, the quality of teaching in school suffers. Besides, in the present context of knowledge-intensive and information-driven society, it becomes even more important for teachers to become facilitators of learning in diverse learning situations rather than merely performing teaching role in a face-to-face situation. It is in this context that there is an imperative need to provide a substantially stronger academic foundation as well as a rigorous professional training for teachers.

On a deeper analysis of the context and background of Teacher Education system, it is noticed that both economic and social factors have been responsible for shaping and determining the quality of Teacher Education system in many countries. Additionally, the colonial legacy has also imposed certain rigid conditions, which has made many developing countries difficult to overhaul the Teacher Education system to suit the current socio-economic demands and challenges. Obviously, Teacher Education system is found to receive low priority in the process of educational reform in such countries. Thus there seems to be considerable variation in the way Teacher Education programme has been organized and structured for different stages of education across countries in the world depending on their respective level of development.

Traditionally Teacher Education is identified with training of teachers for classroom teaching in a face-to-face situation. Besides, textbooks and examinations play key roles in classroom teaching. As such planning and delivery of lessons revolve round the prescribed textbooks. There is very little scope for the teacher or the teacher trainee to be creative and original in making classroom experience an exciting experience for the learners. The focus of the classroom teaching is geared towards passing on textbook information for the purpose of qualifying in the year-end examination. Essentially, what and how much of information has to be passed on to the students by the teacher within the prescribed time slot is given more emphasis by the teacher than what competencies and skills have to be developed among the students. Eventually, the focus is more on teaching rather than on making students learn.

The Teacher Education system in India, which evolved during the early periods of independence continue to flourish in its traditional and conservative mold with very little changes in its structure, content and practice despite the change in the perception and practice of teaching and the need for education to respond to the emerging socio-economic and political challenges. A peek into the survey of educational researches in India over the years reveals several shortcomings in the existing Teacher Education system. Some of them are: mismatch between Teacher Education and teacher practice; it fails to equip the trainees with necessary practical skills for a variety of situations; that it is mechanistic, ritualistic and stereotyped; that there is inadequate monitoring and mentor support to the trainees during practical training; that it lacks professional rigour etc., In this direction, the National Policy on Education (1986, 1992) has called for overhauling the Teacher Education system to realize the new goals of education in free democratic India and to adopt modalities and practices in Teacher Education which can promote goals and ideals delineated for the desired role of the teacher in the new social order. In the past, within the policy discourse on education it is noticed that several committees and commissions have deliberated on the need for a sound professional education for teachers. However, it is the National Policy on Education (1986, 1992),

which has recognized the vital need for overhauling the Teacher Education system in order to bring about qualitative reforms in school education. In this context the Policy has recommended the establishment of institutional support system such as the Institute for Advanced Studies in Education (ASE), Colleges of Teacher Education (CTE), District Institute of Education and Training (DIET) to strengthen the quality of Teacher Education. Additionally the establishment of a statutory body like the National Council for Teacher Education (NCTE) has undoubtedly been one of the significant moves towards achieving uniform standards in Teacher Education across the country.

Challenges to Education and Teaching Profession

Currently, the education system in India is being subjected to both local and global forces. The 73rd constitutional amendment has brought about devolution of powers and responsibilities with respect to school education to the grassroots institutions and the community. While decentralization has given many powers to the grassroots institutions to plan, manage and monitor school education, the capacities of these institutions are at diverse levels, which make it difficult to maintain uniform standards of education across regions and socio-cultural contexts. Under these circumstances, it becomes important to upgrade the existing standard and quality of education at the school level to equip the children with necessary skills commensurate with the emerging situation in the country. Clearly, this demands that the education provided across different regions-urban-rural or under different types of schools-public or private or different forms-formal, non-formal, open—distance should ultimately enable all children to acquire the essential competence and skills to become functionally productive in varied situations.

Simultaneously the process of globalisation has also impacted the education sector in terms of reduced resource support to higher education, greater privatization, emergence and supremacy of IT related courses, increased use of interactive communication technologies and revolutions in the instructional design and delivery of educational services. More than anything, emphasis on achieving excellence, providing increased specialized skills, promoting competition are becoming key concerns in the emerging educational scenario. These factors have posed fresh challenges to teachers, who need to equip themselves with innovative delivery skills and build rigorous professionalism into their roles. In the recent decades, the state, national and international efforts to improve elementary education have resulted in increased participation at secondary level as well. Moreover, in the context of globalization, there are pressures to redefine the role of secondary education consistent with the long-term economic and social goals. In this direction, a dialogue has already begun in India to evolve a national plan to universalize secondary education commensurate with many developed economies in the Asian continent to retain a competitive edge in the global scenario. Thus, the need for reforming the Teacher Education system in order not only to improve the quality of school education, but also to achieve excellence and supremacy in the field of education assumes relevance and significance in the present context.

Globalization has also impacted education sector in the country leading to several structural changes in the form, organization and delivery of educational services. The incorporation of Information and Communication Technology (ICT) in several of the education and training programmes for a variety of clientele group has profound influence on the teacher and teacher preparation. The ways of knowing things and acquiring information has changed tremendously with the use of information technology. ICT makes it possible for the students to access knowledge and information through Internet, TV, satellite and cable network and digital media. Such a phenomenon results in lesser dependence of the learners on classroom teaching and on the teacher as a whole, thus destabilizing classroom teaching based on textbook content. Under these circumstances, it becomes even more challenging for the teacher not only to plan and organize learning in entirely diverse situations, but also to synchronize learning mediated through multiple delivery mechanisms.

Within the context of globalization, another equally important development is the internationalization of education, in particular of higher education. Such trends of internationalization of education emphasise on national and international partnership based on common interest, mutual respect and credibility. An important outcome of

such partnership is the General Agreement on Trade in Services (GATS), which is essentially a legal framework for transacting education across the borders. In the event of Indian higher education being subjected to GATS, it has serious implications not only for primary and secondary systems of education, but also, more importantly, for the Teacher Education system to upgrade its quality and add a strong dose of professionalism to prepare teachers to face the emerging challenges more, competitively.

Besides, sufficient basic skills, critical thinking, lifelong learning and technological literacy have become the new keys to productivity in the emerging knowledge based society. Such challenges and demands add new dimensions to the teaching activity thereby implying the need for building more rigor and professionalism into the teaching profession. However the question that arises in this context is to what extent the present Teacher Education programme prepares the teachers to face such challenging situations effectively?

UNESCO (1994) considers that teachers are in the vanguard of the Twenty-first Century. In this context it recognizes the primordial role of teachers in shaping tomorrow's world and to give them the recognition and practical support they need to accomplish their vital task". This issue was also addressed in the 1996 report of UNESCO's International Commission on Education for the Twenty-first Century, chaired by Jacques Delors. The role of teachers is central to the over-all thrust of this report. According to this report, the concept of learning throughout life is one of the keys to the Twenty-first Century. As the world increasingly comes into the classroom, the classroom must increasingly go into the world. Education, to be relevant and effective, must move into the community and into the workplace. Education must, in short, meet the challenges of a rapidly changing world and changing patterns of life. The report further adds that traditional responses that are essentially quantitative and knowledge-based are no longer appropriate. Each person must be equipped to seize learning opportunities throughout the life. Education, says Delors, must be organized around four fundamental types of learning: learning to know, that is acquiring the instruments of understanding; learning to do, to be able to act creatively in one's environment; learning to be, to develop one's personality and be able to act with ever greater autonomy, judgment and personal responsibility; learning to live together, to participate and co-operate with others in all human activities in a spirit of interdependence.

Reforming Teacher Preparation Programme: New Directions

The process to reform Teacher Education should essentially take into account new challenges that faces the education system and the teaching profession and accordingly the teacher preparation programme should be reconceptualised and reorganised. In this context, what paradigm shift one should adopt in theory and practice of Teacher Education is an important question. This paradigm should necessarily aim at developing a new perspective for professional learning rather than just restructuring the existing programme. This means that we need to make a critical assessment of the existing theory and practice of Teacher Education and evolve new framework for preparation of teachers appropriate to the level and subjects of specialization. This framework should include both content enrichment component as well as practical skills of planning, designing and delivery of learning packages. While intensive training is required to provide deeper insights into the content areas, there should be scope for providing extensive exposure to developing practical skills to handle varying learning situational contexts. The ultimate goal of training has to be geared towards acquiring subject expertise and practical skills to transact the same. The mechanistic and stereotyped mode of planning and delivering lesson during training has to be replaced with innovative and creative modes. In order to do this, adequate space has to be created in the structure to build in flexibility and divergence.

An other important priority that needs to be given in the teacher preparatory programme is the integration of technology and effective teaching practices. Fundamental to the role of technology in improving education is a paradigm shift from a focus on instruction to a focus on learning. Technology has the capacity to facilitate the shift from didactic to interactive learning, from teacher-centered to learner-centered classrooms, from memorization to inquiry and invention, from quantity of memorized facts to understanding.

Emergence of networking and consortium between universities and institutions for restructuring and reforming teacher preparation is yet another strategy, which holds great promises for improving the quality of teacher preparation. There are already efforts by non-education private sectors and IT software professional that are venturing into teaching and education business through development of interactive technology mediated learning materials with adequate on-line support. In this context, it becomes essential for the regular teachers to equip themselves with high-tech skills of designing such learning packages through mediated technologies to make learning more effective. Besides, as the availability of diverse communication and digital media and the Internet are becoming easily accessible for large number of students, it has become possible for the students to acquire knowledge much more quickly and easily outside the classroom. In such a situation, it becomes even more important for teachers to keep ahead of their students in using the multi-media package for planning and organizing learning situations. Obviously, pre-service Teacher Education should include this component to equip the would be teachers to deal with the emerging challenges.

Yet another aspect that requires equal attention is the need for strengthening linkage and collaboration between and among host of institutions and agencies such as Teacher Education colleges, schools, university education departments, the local education offices, the professional media agencies and the voluntary agencies in designing, implementing, managing and evaluating pre-service Teacher Education.

It is also necessary that the Teacher Education programme includes a strong community component wherein the pre-service teachers spend considerable time in schools and communities interacting with the families and other local agencies. This would enable them to understand the learners' needs, their social and cultural milieu and assist the school in strengthening the bond with the community so as to derive mutual benefits.

In fact we also notice that measures of success for teachers are also moving from an input focus to an output focus. Successful completion of a Teacher Education program is now not always enough for a teacher to be considered successful; performance-based measures are usually required as well. Teacher educators can use technology to track students' performance and success. Videos can be used to assess student skills in the classroom, and process/product-oriented portfolios that include technology applications to teaching and learning can be useful in measuring a student's teaching ability.

Thus the above new directions hold great promises for reforming teacher preparatory programme. However, an important and fundamental reform that should precede this is the change of mindset and attitude among the teaching community.

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Overcoming High Expenses of Higher Education

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Rabindranath Tagore once said "we have only one country in this universe, and that is the world". Tagore's such a powerful philosophy may ultimately be realized if today's tenet of "one world one village" is implemented in its true sense in the future. To achieve this, a trend has already been initiated throughout the world. Privatization, liberalizatioin and globalization are replacing liberty, fraternity and equality all over the world including the countries of the third world. It does not mean that liberty and fraternity have no relevance in today's society. They are ever alive and their universal appeal shall ever remain for the noble cause of human society, but today they are not all in all. Privatization and universalization shall be the other social partners with them. This is a wave brought forward by different emerging technologies, which are often interactive, interdependent and diffusive. Information technology, computer, communication, micro-electronics, genetic engineering, biotechnology and space technology are a few to name. The developing world in general is lagging far behind the modern technological evolutions and revolutions. Besides, the developing countries are hardly having the capital to deal with such fast, rapid and perpetual changes. The developing world in general is labour-intensive rather than capital-intensive. Therefore, a debate on the ability, suitability and the acceptability of liberalization is going on and will continue to go on for some more time in the developing countries. Initial mismatch and inertia are parts of life and the fact is that the society never denies mobility. Society ultimately accepts technological changes, which might have been unavoidable to the society even a few years back. What has happened to the development of computer in government sectors in India today is anybody's guess. This is a lesson that the third world always forgets. Consequently, the third world continues to lag behind the international trend, and loses money, as there is hardly any planning for technological upgradation and applications. We can evoke a figure to justify this point. Telecommunication lines in India are 66% digitized; whereas figures of Brazil and Hungary are respectively 35.7% and 41%. But the faults figures are 218 faults per 100 lines in India and two faults per 100 lines in the USA and Japan. Better is not the sole dimension of competitive advantages; faster is equally another important dimension. Thus it will be a sound strategy for a developing country to take part in the globalization without any further loss of time, but with intelligent, selective, judicious and strategic applications of globalization process and uses of an innovation with suitable technologies. Analyzing the problems of the Third World in depth, Dr Colombo observed: The ability of the developing countries to derive all the benefits of the new technologies, faces one stumbling block right from the start. Although rapidly and seemingly effortlessly permeating the economic and production systems of the world, these technologies are not available 'off the peg'. They have to be absorbed, metabolized, mastered and controlled. Their application calls for a pre-existing capability to insert new ideas, new practices, and new elements into a flexible system. This does not simply exist in the vast majority of the developing countries.

Developing countries need to have highly trained, skill oriented and innovative people. Today's success theory is IT — Innovation and Training. Porter's model of success is 'innovate or perish'. This is possible "if our people power is superior in terms of knowledge, know-how (Note : need of training, skill etc.) and innovative capacity (Note: need of research and development). We have already seen that arguments based on the availability of highly qualified but cheap labour are untenable" (Sen-1998).

In ancient times, knowledge was taken as power. With industrial age, technology took away the power from knowledge. But with the third wave and the consequent all around impacts of information technology (IT) on society and economy, the power is back to basic. Today knowledge is power. Knowledge has become saleable. It has now been recognized all over the world that the most precious resource is the human resource, the resource of knowledge and the resource of over fertilized brain. For developmental and economic advantages, human resource development (HRD) has been recognized

as the most important tool in this age of information. Peter Drucker opined that "the leading original group of the knowledge society shall be knowledge workers and knowledge executives who know how to allocate knowledge to productive use. Yet, unlike the employees under capitalism, they will own both, the means of production and the tools of production the crucial point about a post-industrial society is that knowledge and information become the strategic and transforming resources of the society, just as capital and labor (sic) have been the strategic and transforming resources of the industrial society. Frank Leavy, Professor of Urban Economics at the Massachusetts Institute of Technology states that "education seems more closely tied than ever to an individual's economic success. He found that 15 years ago the typical college graduate took home 38 percent more than the worker with a high school diploma. Whereas today, the typical Administrative Reforms Committee (ARC) of Moraraji Desai and K Hanumanthaiya recommended that "All posts in a functional area whether in field or at head quarters or in the secretariat' should be staffed by members of the corresponding functional services" ARC of West Bengal headed by Dr Ashoke Mitra, M P recommended that "the technical head, whether already holding the position of ex-officio secretary or otherwise, should be formally designated as the secretary to the department". Of course, later we shall see this practice may be coupled with open administration structure in order to derive maximum benefits.

At a symposium on HRD policy conducted by the International Institute of Management Science, Calcutta, at the New Delhi YMCA a noted Emeritus Professor of the University of Delhi confessed that all round development of his department was not possible as his departmental advisory-cum-governing body was full of non-departmental professors. Such type of exploitation originated administration is existing in our Government and is mainly responsible for the fact that though "we nave progressed in the field of science and technology, that has not changed the condition of the people in general" (anguish of our ex-Prime Minister Mrs Gandhi). We are highly in need of better human resources in technical departments.

India, at present, is having two types of technical education and two types of technical institutes. Types of technical education are: (1) Conventional Technical Education and (2) Modular Technical Education. Types of institutes are : (1) Government / Government Sponsored Technical Institutes and (2) Private Technical Institutes.

Modular Technical Education in India is new and is very limited on scale, whereas Private Technical Institutes are on the move in recent times, particularly after the adoption of open economy in India in 1992. In view of this in the paper we shall do SWOT analysis of modular technical education and that of the private technical institutes. Based on SWOT analysis, we shall propose a solution to:

'What innovation does India need in higher education to produce quality technical manpower without any risk and with little state funding'?

Swot Analysis of Modular Technical Education

Modular technical education is a multi-entry multi-output (MEMO) system. The modular technical education scheme is illustrated in Fig. 1. In the

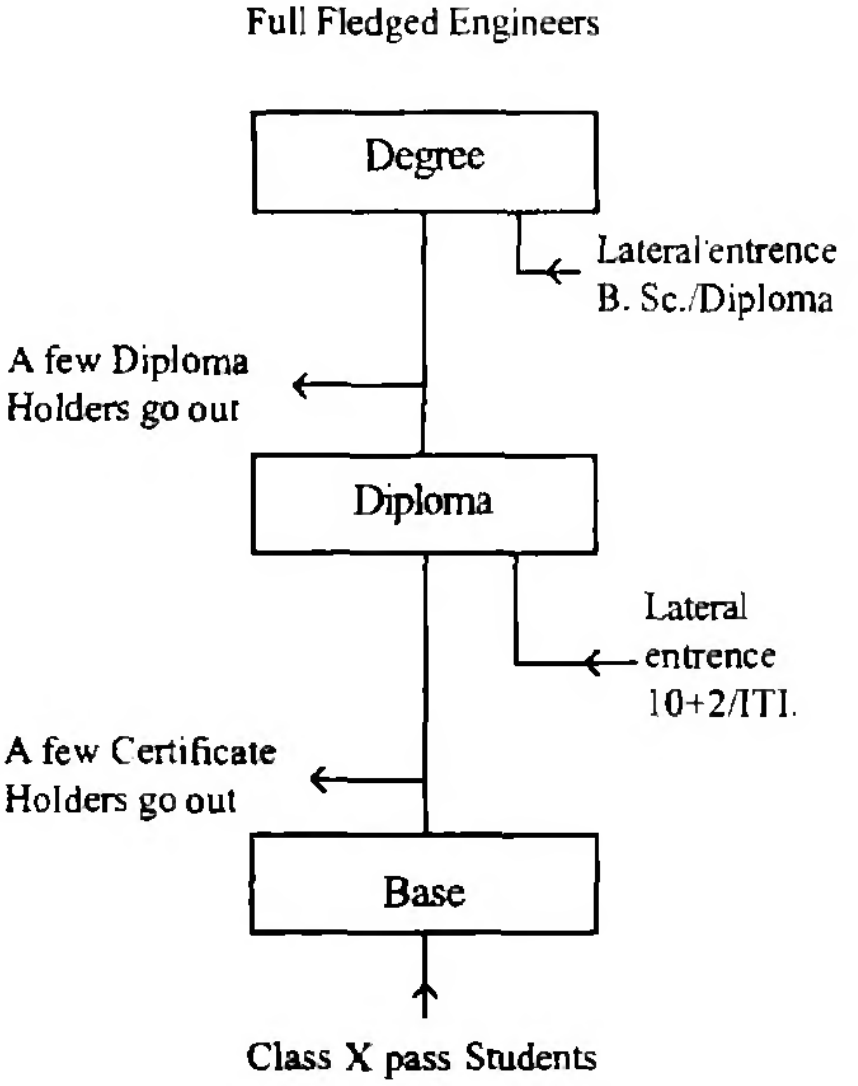

Fig. 1

scheme class 10 passed students are admitted to two years' Base Module or Certificate Module. Based on merit and / or percentage of seats reserved for upward

mobility, some students move to the next module known as Diploma Module, which is again of two years duration. Ten plus Two passed students and ITI students are allowed to take lateral entry in Diploma Module to fill in the seats vacated by terminal students of Base Module. At the end of diploma, again a few students have to go out with diploma; and remaining students get vertical admission in the next module known as Degree Module which is again of two years duration. Lateral entry is taken into degree module from students of B Sc and diploma.

In 1979, a 30 years old man with a high school diploma earned a yearly average US $ 27,000 dollars (in USA) whereas by 1993, his salary had drowned down 20,000. According to the statistic from the Census Bureau, earnings (in constant dollars) of college graduates grew slightly over the same period.

The advantages in computers and other technologies, as well as the demands of competition in the international marketplace, are swiftly transferring the skills used in factories, healthcare, food processing, construction, energy production, banking insurance, and many other occupations. Even the lowest jobs required some mathematics and science skills. No one has articulated this insight better than MIT economics professor Lester Thurow, who in an article in the Sunday New York Times of 16 February 1997 was quoted as stating, "Those with third world skills will earn third world wages". Besides, our education system and structure are all copied from the developed nations, and therefore there is a wide uncoverable mismatch between what we need and what we are doing in education sectors. This is why we often feel our higher education is costly, and this is why we fail to meet with the financial requirement of higher education. Third world countries badly need to change education systems and structures with the following things in mind:

- Production of highly skill-oriented technical engineers rather than academic engineers.
- Introduction of self-revenue generation scheme in institutes and universities for investment in Research and Development.
- Developing measures to attract bright students into faculty and stop brain-drain.
- Integrated approach in education system.
- Removing prejudice and performance in education management and budget allocation to the institutes.

Proper use of products of higher education, in planning and execution—in this regard it shall be very right proposition to refer Dr S Basu's observation made in his article that even in project specific matters in government, authority rests with bureaucracy causing thereby returns of higher education to marginal level. We can cite different recommendations of different high power committees: The Lateral entry students both at the diploma and the degree modules are given some bridge courses to make them at par with vertical entry students.

The modular technical education has the following SWOT parameters:

Strength

- A single Institute produces engineers at different levels from Certificate to Degree.
- The system is a cost-effective higher education system.
- The optimal utilisation of man - machine - material - money resources is possible in the system.
- Modular scheme is an integrated approach to higher education.
- Continuous exposure of students since their early age in experiments makes them more experiment-oriented.

Weakness

- When same faculty members teach at different modules, the teaching at some levels may not be appropriate.
- Syllabus for modular education is yet to be standardized at the national level. Due to MEMO scheme, overlapping of courses are unavoidable causing some courses being over taught and some courses lesser taught.

Opportunities

- Due to the availability of students at different technical levels Institute - Cum - Industry (I-C-I) scheme could be implemented easily. This will make Institutes financially self- sustained and self-supporting.
- Conversion of technical education into I-C-I may

attract bright students to join teaching profession by virtue of I-C-I's ability to pay higher perks and to provide better infrastructure and opportunities for professional growth.

Threats

- The modular concept lies on MEMO operation. Students often take admission in the Base.
- Module thinking that they shall go out as degree engineers. The pressure on this from students union may cause terminality at the end of Base and Diploma Module to hamper, thereby destroying the system itself.
- There remains a high probability of an unworthy-nexus between students and teachers, for vertical mobility.
- If man - machine - materials are not optimally used and integrated, overspending in conventional institutes may occur.

The SWOT analysis suggests that modular technical education needs wider acceptance and support and experiment for making it a viable alternative to conventional higher education. However, design of a course structure and syllabus for modular technical education is a big challenge. But it can be overcome.

Swot Analysis of Private Technical Institutes

Strength

- Higher education is not at the cost of state funding,
- Initiatives are outside the purview of Government bureaucratic rules and procedures.
- Education is at corporate-like environment rather than at conventional educational environment.

Weakness

- Laboratories and Physical Infrastructures may not be at par with those of Government, Government-aided institutes.
- Profit only motive may cause immature death of private institutes.
- Profit motives may enforce the private institutes to admit weak but rich students at the cost of meritorious but poor students.

Opportunities

- Society gets more and more technical manpower.
- Private initiatives may both be better profit making industries and institutes for human resource generation–this shall be I-C-I revolution.
- Competitiveness in education may enhance the productivity and the quality of education,
- More technical manpower may lead to growth of entrepreneurs in society.

Case of West Bengal—Cyclic Wrong Path

Since the open economy was introduced in India in 1992, there has emerged a trend to privatize higher education. All successive governments are pursueing this trend. During the last few years it is being argued that government cannot afford the high cost of higher education. The priority of the government is to make India a literate state, and thereby more investment is being directed towards elementary or primary education. This amounts to say that the government's aim is to make its people educated upto certain level and not beyond that. And only the rich people then can go for higher education as they could afford the same. This will eventually lead to dangerous consequences. India should not do things in the wave of privatization, liberalization and globalization as the advanced countries do. Privatization, liberalization and globalization should not be the destination of India, but would be a means of achieving not only a strong economic, state but also a strong people base. The advanced countries are so strong in economic affairs because they have a strong intellectual, research and skilled people power. It appears that Indian governments are just copying the idea of privatization of higher education from foreign countries. The countries where the private higher education has been existing over years, can all afford the high cost of privatized higher education. Can the Indian mass afford it the same way? Copying of ideas without considering the real picture of the country and the consequences thereof, can be dangerous for the country's prosperity in future. A survey on European countries reports that "Research, Development and Computer Services rank first in the employment of people with higher education levels, who represent 63% and 52% respectively of total employment. "This being the case of European countries, India should rethink twice before going for wholesale privatization of higher education. It will be pertaining to mention here what Mederico Mayor said, *(Courier October '99)*, that "Globalization must never remain confined

to only the networks, the telecommunications, the computers, the media world or markets. It will have to be based on the consideration of a public democratic space worldwide. It is only on this condition that we will sueceed in rendering globalization humane, making it a project with truly universal promise and giving it a meaning. "Therefore in future if such a meaningful globalization eventually emerges out, the country with high intellectual and knowledge base will be the leader. Has the present education policy taken it into its consideration? Besides, a UNDP reports says "in 1960 the 20 per cent of the world's people who live in the richest countries had 30 times the income of the poorest 20 per cent—by 1995 they had 82 times as much income". This being the effects of globalization, we need to have counter effect for true globalization. Better and widespread higher education would be the only strategy for the counter effect.

Successful participation in the globalization process surely needs the sound manpower base in the current knowledge-based society. Surely, for the competitive advantages in liberalized economy and to become a leader of privatized and globalized world, today knowledge has become the absolute resourcc. Developed countries have become successful because they have generated adequate quality human resources. They havc generated high quality man power by the private initiatives. It does not guarantee that the developing countries would be able to do so in the same way. Economic, social and literacy gap between the rich and the poor is meagre in developed countries, which is not the case ir developing countries. Besides, the developing countries are having very high percentage of people living below poverty line. The existing wide gaps between the rich and the poor in the developing countries, and the very high percentage of poor people of the developing countries are the well recognized sources of exploitation and sub-standard production. Besides, as private higher education would necessarily be linked with higher tuition fees, such education will remain untouchable to the vast poor and weaker sections of the developing nations, thereby depriving many meritorious students to become the future national leaders and authorities of science, technology and economics, and their valuable contributions to society, which is undoubtedly a national loss.

It is not clearly understood why the government is not desirous of running state sponsored institutes with substantially increased tuition fee that private institutes are being allowed.

Peter Drucker Bill opines that "the leading original group of the knowledge society shall be knowledge workers and knowledge executives who know how to allocate knowledge to productive use. Yet, unlike the employees under capitalism, they will own both, the means of production and the tools of production. The crucial point about post-industrial society is that knowledge and information become the strategic and transforming resourees of the society, just as capital and labor (sic) have been the strategic and transforming resources of the industrial society. "Education seems more closely tied than ever to an individual's economic success, according to a 1996 study by Frank Leavy, Professor of Urban Economics at the Massachusetts Institute of Technology (MIT), in Cambridge".

Therefore, if the State sincerely wants to take part in globalization process for growth and prosperity, more and more state funding in higher education is essential. The West Bengal Government rather than being a follower, can be a leader in opening more and more state sponsored centres/universities of higher education, science and technology, and in lieu keep aside West Bengal State Electricity Board, West Bengal State Transport Corporations etc for private take-over. West Bengal has to open many more technical universities and institutes in engineering, agriculture, and medicine. The State is lagging far behind other states like Tamil Nadu, Karnataka and Maharashtra. Let private institutes come up, but let the government does not throw its responsibilities of education for all levels whose master advocate was the left front even a few years back.

The irony is that during the industrial age when capital was the driver, the West Bengal followed the path of socialism and the state funding of higher education contrary to what would be deserving. The same is being repeated in the information age, while knowledge is the driver, the state prefers to leave higher education to private parties giving capitalists to run the show. The cycle of wrong path rolls on!

Problems of the Higher Education

The present conventional system of higher education is stated as expensive. Whereas about

80% of mass do live below the poverty line, the nation cannot afford to invest more in higher education at the cost of elementary education, basic health and other social infrastructure. But to fit in the open economy, quality technical manpower is essential which in tum needs more investment in technical education. India needs to generate more and quality technical man power on one hand for which more funding is required, but on the other hand she cannot afford to fund. Academicians have to solve the puzzle.

We have to answer ourselves :

Is higher education really costly in India ? If so, what are the reasons of this?

In international reference, particularly in reference to advanced economies, higher education in India is not so costly. Higher education in India appears costly because of the following reasons:

a) Lack of integrated approach in education system.
b) Brain-drain which denies investment returns.
c) Lack of political and Governmental will to utilize the product of higher education
d) Prejudice and preference towards some institutes in allocation of budgets,
e) Lack of spirit in expansion of education in an equitable and cost effective manner, and in the process, making higher education system financially self- supporting.

Funding is also directly related to the quality production and teaching in technical education. Prof A. Bhattacharjee reportedly made an observation that "IIT's produce export quality engineers". But how? Keeping aside the fact that most brilliant students take admission in IITs, the reason of producing export quality manpower by IITs is three Bs of IITs:

- Better faculty members
- Better physical infrastructure (laboratories, teaching aids and libraries)
- Better funding

Thus it is a mere logical extension that to have quality in Technical Education the most practical approach shall be to go for these three Bs. For these three Bs, we need a sufficient fund.

Solution

Considering the above stated problems of higher education, the problem of state funding in higher education and the need to generate quality technical man power; it is proposed that we can go for I-C-I (*Institute - Cum - Industry*). The I-C-I will consist of two departments, namely industry department and institute department. The role of the industry department will be to implement commercially viable projects in which the final year degree / postgraduate students will be the major and main contributors. What is the harm if a group of final year degree students of electronics discipline is asked to design a fully commercial PC set as a compulsory part of their degree course ? Is it not possible to ask to group of final year postgraduate students of electronics that the complete design and installation of a packet switched network for a region is mandatory for getting their degree ? The industry department will also conduct the practical classes for the degree and postgraduate level students under the supervision of the concerned faculty member of the institute department. Practical classes for certificate and diploma modules may also be conducted in the industry department. The faculty members may be allowed to conduct their research work in the industry department with full liberty for which there will be a separate section.

The intake of the proposed I-C-I shall comprise 10th passed students as in modular scheme, thereby combining two innovative ideas. However, education structure will be somewhat different from the modular scheme as indicated below:

(i) One and a half years will be the duration for certificate course, for vertical mobility students. Half an year more will be required for students terminating studies to do work in industry as trainees.

(ii) Three years will be the duration for the diploma course, and only top 60% students of certificate course will be admitted to the diploma course provided they secured more than or equal to certain percentage of aggregate marks in the certificate course. For students terminating their studies at the diploma level will have to undergo half an years additional industrial training in the industry section for getting their degree.

(iii) Three years will be the duration for the degree course and admission procedure will be as in diploma level, but based on both the results of certificate and diploma. The specialized course will be offered at the first year of the degree

course. The special papers will be allotted 50% of the aggregate marks.

(iv) One and a half years will be the duration for postgraduate course out of which half an year will be for theory class, half an year for project and half an year will be kept reserved for research (extension of project) in respective specialization with the condition that based on this research at least one paper must be published by individual student / group in order to make them eligible for the award of the degree.

In the ICI theory, duration has been fixed for certificate (base) / diploma courses on the basis of the requirements of 'know-how', while for degree and postgraduate courses the duration has been fixed on the basis of the needs of 'know-why'.

It is often argued that the syllabus is not as per the requirement of the industry. Such a remark is baseless. The requirements of different industries are different. ITI may need different type of specialized electronics engineer than what BEL needs. Therefore it is justified and more logical that the institutes shall produce and provide engineers with common levels and subjects. Industry with training will make the common level engineers specialized engineers. Keeping this in mind, the duration of the course for the terminal and the vertical level students have been fixed for both institute and the industry sections.

The industry section will earn revenue for running the institute as well as for investment in research and development. By this the developing countries can overcome the financing problem of higher education and research.

In I-C-I there shall be two sections : institute and industry. They will go hand by hand and flourish uniformly in an integrated manner. 100 per cent and practical interaction of the institute and the industry will be implemented by I-C-I. One needs today an environment where educators and researchers must not be separated from engineers by some hypothetical walls.

There is an industry in I-C-I which may be basic research industry, training industry and the market-oriented industry all together. The industry will be under control of professors, students, and other usual staff. The industry shall earn revenue for I-C-I serving as a feedback to funding of higher education.

Recent observation of Prof. U.R. Rao in favour of basis of I-C-I state that "Real progress can never be achieved without industries having a strong organic linkage and dynamic interaction with the universities and technological institutions. Continued dependence on imported technology, adoption of kit cultures and the black box approach by our industries and the reluctance of our research and development institutions to work in closed cooperation with industries, have resulted in our industries becoming outdated and uncompetitive in the global market".

Basically I-C-I comprises:

(a) an innovative type of technical education system that will produce technical engineer rather than academic engineer at different levels,

(b) a cost effective higher education system,

(c) an internal revenue generator (IRG) establishment,

(d) an institute which can flourish industries innovatively and economically.

(e) an institute which can curb brain-drain, and

(f) an institute which can raise status and pay-scale of faculty members.

Conclusion

I-C-I based on MEMO education system is supposed to be established by less state funding. Only at the initial stage funding is required. I-C-I is seen to be a cost effective system for generation of high quality technical man power, vis-a-vis, 'technical engineers' rather than 'academic engineers'. Several surveys confirm the acceptability of I-C-I . I-C-I is a practical and confirmed instrument of 'Institute Industry Interaction'. Therefore, for poor countries like India I-C-I is a better alternative for promoting higher technical education at an affordable state funding. ❑

INVITATION TO AUTHORS

Authors are invited to contribute articles on contemporary issues in higher education in general and Indian higher education in particular for publication in the 'University News'. The articles may be sent as an e-mail attachment in MS WORD to *aiu@del2.vsnl.net.in* or printed / typed copy in duplicate along with floppy by post at the following address :

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The Power of the Indian Mind

Jagmohan, Minister of Tourism and Culture, Government of India, delivered the Convocation Address at the twenty-fifth convocation of Kurukshetra University, Kurukshetra on February 4, 2003. He said "The most inhuman face of the disparities is seen in the pattern of food consumption. A person in the developed countries consumes, on an average, 1000 calories per day more than a person in the developing countries. The average North American consumes five times more than a Mexican, ten times more than a Chinese, and thirty times more than an Indian. In regard to energy-use, the United States, with just five per cent of the world's population, produces a quarter of the world's carbon emissions, more than any other country, 11 times more per head of population than China, 20 times more than India, and 300 times more than Mozambique. The moderate targets prescribed by Kyoto Protocol have been ignored, though, the international community has been repeatedly warned by eminent scientists that five to ten years delay in cutting out green-house, gas emissions could put the job of stabilizing the atmosphere beyond reach and the planet could well be on its way to becoming a human-free zone.". Excerpts.

To be in Kurukshetra is particularly a matter of great joy for me. It is the very soul of Indian civilisation. It was here that a great Battle of Right over Wrong was won. It was here that the great Message of Gita was delivered. It was here, again, that the integral nature of the universe was understood, the pattern of cosmic reality unfolded and the concept of One in All and All in One evolved.

Nearby also flowed the great River Saraswati which was the origin of Indian civilisation and which disappeared in the sands of time due to tectonic and other changes. We are in the process of injecting new life in Kurukshetra and making it a symbol of a resurgent and reawakened India. We have embarked upon a great adventure of unearthing lost cities which once existed along the embankments of Saraswati River and left a number of signposts of the Saraswati-Indus civilisation from Adi Badri near Kurukshetra to Dhola Vira in Gujarat.

All these signposts are intended to be converted into new centres, all over the country, in which elements of culture, tourism and clean civic life are being synthesised. Kurukshetra is being given a top position in the list of such centres. Believe me, a revolution is in the making. Kurukshetra would become not only a world class tourist destination, but also a pace-setter for this revolution.

To the young students on whom degrees are being conferred today by the Chancellor, I would extend my heartiest congratulations and warm good wishes and also say, you have crossed just one milestone in your career. The frontiers of knowledge are ever-expanding. This is an age of great many revolutions - revolutions that are moving at revolutionary pace. There is revolution in space, revolution in electronics, revolution in information and revolution in genetics. There is not a branch of human knowledge which is not witnessing rapid changes. More and more vistas and more horizons are becoming known to mankind.

To peep into these new vistas and new horizons, you have to soar higher and higher in search of knowledge and truth. Your approach has also to be innovative and creative. It must never be superficial, as superficiality could be the worst enemy of an educated man. As a Russian poet has said:

"Superficiality - worse than being blind
We proceed along with half an answer
Bearing our shallowness like a treasure
Then comes the snuffing out
Our inability to flee or flight
And feather of our tamed wings
Becomes the nasty pillow for the night"

Replacement of the Culture of Superficiality by a Culture of Creativity

India, as a whole, need to shake off its current culture, which is predominantly superficial and soft, and replace it by a new culture which should be predominantly creative and constructive. Strands of imitation must give way to storm of originality which can bring in fresh breeze to sweep the dust and haze that hangs around us these days.

In this connection, I would invite your attention.

young friends, to the greatest heritage and asset of India the Power of its Mind. My belief is that, unless this power is regenerated, India can neither exploit its potential to the full nor evolve a distinct style of its own—a style which its current social, economic and political requirements as will as its 'ancient nobility of temper' and spiritual heritage warrant.

Power of the Indian Mind

Every nation has its own special attributes. The special attribute of Germany is its organisation, of the US its enterprise, of Japan its adaptability and of Great Britain its balance. The hallmark of India has been the power of its mind.

It was this power of mind which found expression in its pre-eminent philosophy, religion, culture and way of life which led Will Durant, the celebrated American historian, to conclude: "India was the Mother of our Philosophy; Mother of much of our Mathematics; Mother, through the Buddha, of the ideals embodied in Christianity; Mother, through the village community, of self-government and democracy. Mother India is in many ways the Mother of us all..."

Similar was the salute of Max Mueller to this power of the Indian mind. He wrote: "If I were asked under what sky the human mind has most fully developed the choicest gifts, has most deeply pondered on the greatest problems of life, I should point to India".

In the same strain, Voltaire has observed: "I am convinced that everything has come down to us from the banks of the Ganges, astronomy, astrology, metempsychosis, etc. It does not behove us, who were only savages and barbarians when these Indian and Chinese peoples were civilised and learned, to dispute their antiquity".

Products of the Power of the Indian Mind

In support of my proposition about the power of the Indian mind, I would take up, as illustrations, three of its great products: (i) the concept of the universe being an organic cosmic web; (ii) the concept of ecological balance; and (iii) the concept of *Karma Yogi*.

(i) Cosmic Web and its Organic Entity

One of the finest pieces of evidence which shows how powerful and insightful was once the Indian mind was its clear and correct understanding of the pattern of human existence on this planet and beyond. It perceived the 'non dual reality' that lies behind the smoke-screen of 'surface duality' and realised that the universe was an organic web which every item of life and nature was inextricably enmeshed with every other item. It also understood that this web was permeated with a cosmic force of which man and nature are the constituents as well as the contributors.

This deep perception, this great realisation and this subtle understanding of the Indian mind so impressed the renowned American poet and philosopher, Emerson, that he wrote a beautiful poem, titled: Brahma, in which he gave expression to the concept of non-duality thus:

'They reckon ill who leave me out;
When me they fly, I am the wings;
I am the doubter and the doubt,
And I the hymn that Brahma sings.

This indivisible, this interpenetrative relationship amongst all elements of existence, this phenomenon of 'One in All and All in One', this omnipresence of invisible cosmic force in the entire network of the web, have all been found to be valid by the epoch-making formulations which, in the Twentieth Century, have emerged out of the theories of Relativity and Quantum physics. These formulations have made it clear that the matter is nothing but a mass of energy; that ultimate particle or sub-atomic particle is not a thing but mere inter-connection, something that exists, but can be seen only through a mind's eye, and that the Universe is a web, a complex web, in which mind and matter, life and nature, are woven as an organic entity by way of hosts of interconnections. Clearly, what the Indian mind discovered, centuries earlier, by virtue of its perceptive power and its higher level of consciousness, was discovered by the modern science only recently.

The profundity of the concepts of the universe being an organic web, as evolved by the Indian mind, in the heydays of its power, can best be brought home if we look in depth on the world around and note its paradoxes and perplexities.

Indisputably, the contemporary world has seen a great revolution in science and technology and also an unprecedented increase in the wealth of some nations. Of late, human knowledge has been doubling every ten years. Information, communication and digital technologies are moving forward and converging very fast. The power of the computer is doubling every 18 months and that of Internet every year. New discoveries and inventions are being daily made. Take, for example, the medical sciences. Many dreadful diseases are being

contained or eliminated. Heart bypass surgery has become a routine. Gene transplant from higher organisms holds the promise of raising the physical and intellectual level of mankind. Chemists have already synthesized over eight million compounds. Electronic mail has practically conquered time and distanee. The science of 'cloning' has opened new vistas. Never before in history have such all-pervasive improvements taken place!

There has also been a remarkable upswing in the affluence and economic development of quite a few countries.This should be clear from the fact that the world consumption has expanded at an unprecedented pace over the Twentieth Century, with private and public consumption expenditures reaching $24 trillion in 1998, twice the level of 1975 and six times that of 1950. In 1900 real consumption expenditure was barely $ 1.5 trillion.

The setting up of the United Nations has been another significant feature of the contemporary world. Freedom from war was not the only aim. Freedom from hunger, disease and ignorance was also sought. So was all-round social and economic development. To implement the above aims and objectives, a number of agencies, such as FAO, WHO, UNESCO and UNDP were established. And with a view to making the international system more equitable and just, quite a few high-level commissions, such as Pearson, Willy Brandt and Burtland Commissions were appointed, and in that connection hundreds of Conferences, Seminars and Symposiums were held.

With all these advances and measures, one would expect that the present-day world would be a veritable paradise on earth. But what is the position? There are about 1.4 billion people who are absolutely poor. About 18 million people die annually due to hunger or hunger-related diseases. Malnutrition kills about 13 million children under the age of five every year. About 600,000 women die each year in pregnancy and childbirth, and 30 times that number suffer injuries which, to use the words of UNICEF: "are usually untreated and unspoken of and which are often humiliating and painful and debilitating lifelong".

About 7.7 billion people go without pure water supply, and about three billion have no access to sanitary facilities. In cities alone, about 600 million people are either homeless or living in what the United Nations Centre for Human Settlements has described as a "life and health threatening environment". Old scourges like malaria and cholera have reappeared and many new dreadful and incurable diseases like AIDS are spreading fast. About 10 million children have been orphaned by AIDS.

Despite the ratification of the Convention on the Right of the Child, more than 200 million children still live on a semi-starvation diet. About 13 million children, under the age of five, die every year owing to malnutrition. Vitamin A deficiency impairs the physical and mental faculties of about 40 million children, causing even blindness to about 250,000 every year.

The disparities have become so acute that today 20 per cent of the world's people have got 86 per cent of the world's GNP, 82 per cent of the world's export market, and 68 per cent of the foreign direct investment. As against this, the bottom 20 per cent of the people are compelled to live with income of only $ 1 a day and get a share of 1 per cent of the world GDP, 1 per cent of world export market and 1 per cent of foreign direct investment. And these disparities are daily increasing. The last ten years have seen an increasing concentration of income, resources and wealth amongst people, corporations and countries. The ratio between the fifth of the world's people living in the richest countries and fifth in the poorest, which was 30 to 1 in 1960, has increased to 74 to 1 in 1997. The assets of the top three billionaires today are more than the combined GNP of all the least developed countries and their 600 million people.

The most inhuman face of the disparities is seen in the pattern of food consumption. A person in the developed countries consumes, on an average, 1000 calories per day more than a person in the developing countries. The average North American consumes five times more than a Mexican, ten times more than a Chinese, and thirty times more than an Indian. In regard to energy-use, the United States, with just five per cent of the world's population produces a quarter of the world's carbon emissions, more than any other country: 11 times more per head of population than China, 20 times more than India, and 300 times more than Mozambique. The moderate targets prescribed by Kyoto Protocol have been ignored, though, the international community has been repeatedly warned by eminent scientists that five to ten years delay in cutting-out green-house, gas emissions could put the job of stabilizing the atmosphere beyond reach and the planet could well be on its way to becoming a human-free zone.

Disparities are not restricted merely to economic and social fields. They extend to geo-political arena as well. A powerful cartel has emerged and its sinews are becoming sharper and sharper day by day. The noted American intellectual, Samuel Huntington, has rightly observed:" The West in effect is using international institutions, military power and economic resources to run the world that will maintain Western predominance, protect Western interests and promote Western political and economic values." An equally distinguished Soviet scholar of the international scene, Flex Yurlov, has said: 'International political, economic and security institutions are effectively settled by a directorate headed by the United States'. In fact, new emperors in new clothes and with new postures have come on the scene. They may be more subtle and sophisticated; but they are emperors, nevertheless.

The United Nations and its agencies have failed in ending human miseries or in checking income disparities or in preventing the concentration of economic and political power in a handful of countries. The UN Conferences have appropriately been likened to a mythical road on which the traveller takes one step forward only to find that his destination has receded by two steps. These Conferences create an illusion of help being extended to the deprived and the disprivileged while precious little is done in concrete terms. In the world today, in absolute number, more people are living in abject poverty than ever before. more are languishing in slums, more are inhaling polluted air and more are drinking unsafe water. For them, freedom from want or freedom from fear or freedom of expression or protection of human rights are just empty slogans.

The political ideologies of the contemporary world, too, have proved ineffectual in providing a cure to the prevailing maladies. Marxism is the latest 'god that has failed'. The mechanism of globalisation, marketisation and liberalisation has the potential of becoming an unguided missile which could cause havoc in a good part of the globe. What, in essence, is being practised today is social, economic and cultural Darwinism in which the weaker elements all over the world are bound to be relegated to the background by the stronger ones. Fantastic fortune are being made by a few while poverty in which many live have deepened. The starkest contrast can be seen in the cities of the developing world. 'Homeless people living in cardboard boxes, next to skyscrapers occupied by corporations whose budgets exceed those of many countries; growing gaps between the salaries offered by labour markets and the housing costs determined by urban land markets; enormous levels of consumption alongside great pyramids of waste that threaten the environment and human health; and hithereto unseen patterns of segregation, with pockets of wealth at the centre and vast enclaves of poverty on the periphery'.

Ironically, even in the rich countries, affluence has not enlarged the scope of individual happiness or brought about greater balance and harmony in society. On the other hand, it has dehumanised individuals and made them selfish and mechanical in pursuit of personal pleasures. Family life is disintegrating. In some countries, children born out of wedlock outnumber those born in it. Crime is also increasing. For example, in the US, on an average, about 15 million criminal cases are reported to the police annually. About three million children are abused every year and about 7,000 children suffer gunshot wounds. The annual expenditure on narcotics alone exceeded the combined GDP of 80 developing countries.

From the above facts and analysis arise a few fundamental questions: Why, with phenomenal knowledge and skills at mankind's command, should things be falling apart? Why, despite unprecedented affluence in the present-day world, should there be widespread hunger, disease and death? Why are the UN and its agencies failing to attain their objective and coming under the domination of a few? And why are ideologies of the time proving inadequate in creating a fair and just system by fair and just means?

The answer to these questions lies essentially in the total disinclination of the modern man, particularly the 'power elites' in the developed as well as the developing countries, to attend to the 'Great Truth' about the organic nature of life, which the power and profundity of Indian mind had laid bare hundreds of years ago and which was subsequently confirmed by the theories of Relativity and Quantum physics. The modern 'man' has consciously or sub-consciously remained under the influence of such philosophies as materialism and existentialism and entertained such views as propounded by historian Westfall: 'The world is a machine, composed of inert bodies, moved by physical necessity, indifferent to the existence of thinking beings'. He has, in practice, refused to take, a holistic view of reality; and help in developing a system

in which requirements of body, mind, intellect and soul are integrated in a balanced and harmonious pattern and in which human societies function, not as separate, but as complementary and mutually reinforcing units of the same universe. He has not understood that if one or two aspects of human personality or one or two arenas of human society alone are catered to, or are not accompanied by a proportionate advance in complementary spheres, then negative results will accrue.

It is because of the above disinclination and lack of understanding that the Western man and his institutions have created a world which is scientifically and technologically advanced, but morally and socially retarded. All the complexities and contradictions to which I have referred earlier are due to this peculiar 'mix' of advancement in one arena and retardation in the other.

(ii) Concept of Ecological Balance and Sustainable Development

The Indian mind was the earliest to grasp the significance of maintaining the ecological balance. From times immemorial, our sages and saints have been propagating: 'The Earth is our Mother and we are its Children'. One of the earliest vedic hymns, composed over 4000 years ago, gave the message of what is now termed as sustainable development:

> *'Whatever I dig of you, O Earth,*
> *May you of that have quick replenishment!*
> *O Purifying One, may my thrust never*
> *Reach right unto your vital points, your heart!'*

The carrying and recouping capacities of the Earth were reverentially recognised and given a strong spiritual underpinning. That is why India, for centuries together, has remained a treasure-house of natural and cultural wealth. Unfortunately, this long tradition of respecting nature and living in harmony with it has, of late, been mutilated due to the onslaught of unbridled materialism and other negative forces. It has become too effete to have any decisive impact on the ground. Like anywhere else in the world, though hymns in praise of sustainability are repeatedly sung at every symposia and seminar, declarations seldom get translated into deeds.

(iii) Concept of Karma Yogi

I do not think a more lofty, a more elevating a more solid and sound concept of work than that of *'karma yogi'* has been evolved in any other system of thought anywhere in the world. Resting as it is on detachment, dedication and complete selflessness, it cannot but ennoble the holder of power. A work undertaken by a state functionary necessarily involves exercise of power. If this exercise is actuated neither by weakness for reward nor by any other subjective consideration, it cannot lead the functionary astray, and no corruption, malpractice or injustice would ensue. The work gets performed honestly, objectively and effectively. In the circumstances, the individual, the society and the state advance, materially as well as spiritually.

An officer may be highly intelligent and knowledgeable. But if his personality is not warmed by inner strength, his actions would generally tend to be selfish, narrow, partisan or even corrupt. What is, therefore, required is not only physical and mental efficiency but also spiritual and character-efficiency. And this requirement would be fulfilled only if the ideal of *'karma yogi'* is taken as a guiding star. Pursuit of this ideal alone uplifts a knowledgeable and intelligent person to a wise and perceptive one, a casual and negative mind to a creative and positive mind, and a politician and ruler to a statesman and a *Rajasri*. 'Without wisdom', Bertrand Russel has rightly observed, 'increased knowledge would produce more sorrow for man'. Sri Aurobindo has put it still more perceptively: 'Knowledge is so much of the truth, seen in a distorted medium, as the mind arrives at by groping; wisdom is what the eye of divine vision sees in the spirit... What men call knowledge is a reasoned acceptance of false appearances. Wisdom looks behind the veil and sees'.

Waning of the Power

As illustrations of the power of the Indian mind, I have provided to you, young friends, glimpse of three great concepts evolved by it. Unfortunately, with the passage of time and for reasons that I cannot go into here, this power began to wane and the Indian culture suffered a decline though occasional flashes of it were seen in great thinkers and reformers like Sankara, Vivekananda and Gandhi. Overall, the desertification of the Indian mind still needs to be arrested and its green pastures restored.

Failure of Post-1947 India

In 1952, Arnold Toynbee, the celebrated historians

of civilisations, observed: 'In fifty years, the world would be under the hegemony of the United States, but in the twenty-first-Century, as religion captures the place of technology, it is possible that India, the conquered, will conquer its conquerors.'

The first part of Toynbee's observation has practically come true. But, at the moment, there is little likelihood of the second part of his observation coming true. This is because the post-Independence India has frittered away a historic opportunity to recapture and reconstruct the fundamentals of her civlisation and work out a model for herself and also act as a pace-setter for adoption of new civilisational norms by other countries. What Toynbee meant by India conquering her conquerors was that her civilisational and cultural values would become the dominant values all over the world, particularly the western world, in the Twenty-first Century.

Thus, the failure of the post-Independence India has been two-fold. One, it has failed to acquire an inspired vision and rebuild India in the mould of that vision. Second, it has failed to make a solid contribution to the emergence of a new world-wide civilisation the norms of which could have brought about a truly fair, just, equitable, humane and enlightened international order—an order which would have been conducive to the growth of happy and harmonious communities everywhere.

After August 15, 1947, a powerful, creative and constructive mind should have been our main instrument in building a new civilisation, a new culture, a new nation. But we were lured by the ideologies of others and started imitating models set up by socialism or capitalism or combination of both. No wonder, we find ourselves, today, in the worst of both the worlds. The social, economical and political weaknesses, acquired by our system due to the decay and decadence of our once great civilisation, are getting compounded by some of the worst features of the western civlisation. And in the international order, our influence is marginal.

Need for Regaining the Power

It is time we realise the grave omission in our post-1947 outlook and approach and make a determined bid to recapture the power of the Indian mind and use this power as a base for building a new edifice—an edifice whose planks should be shaped primarily by India's ancient nobility of temper, her values of contentment and compassion, her ideals of Karma Yogi, her concept of universe being an organic entity and of one dynamic equilibrium continuously replacing another, and her belief in man's capacity to acquire greater and greater insight and move from a lower level of truth to higher level of truth.

Appropriateness of Kurukshetra

To make such a determined bid, what more appropriate place than Kurukshetra could be found? Here, while the University could be at the vanguard of intellectual and academic forces to recapture the power of the Indian mind and also serve as a workshop for fabricating the planks of new vision, we, in the governance machinery of the State and Centre, could construct a living model by daily arranging, in an exhilarating environment of a charming city, the message of 'Gita for the Modern Man'; by removing dung-heaps of the past and replacing them by blooming pastures, as has been done in the Tapovan and Harshvardhan Parks; and, above all, by bringing to surface the submerged waters of river Saraswati and by greening the wastelands and enacting on the remnants of the lost cities, extending from Adi Badri in Haryana to Hanuman Garh in Rajasthan, and to Dhola Vira in Gujarat, an inspiring drama of new creativity, commitment and compassion and also of balanced and harmonious living.

Role of Youth

In this combined venture in the realm of ideas and in the realm of practice, you, young friends, have to play a pivotal role. This is not a short-term venture. The efforts have to be continuous and long-drawn. But you, who would soon be occupying the centre-stage, would be capable of succeeding provided you bring the fresh and invigorating waters of Saraswati in your mind-stream and also keep in view what Swami Vivekananda said to the youth of India:

> *"You are heirs to the immortal bliss. You are the divinities on the earth. Come up, O lions and shake off the delusion that you are sheep; you are souls immortal, spirits blest and eternal. Rise up with the humility of a saint and ferocity of a lion and fulfil your mission—the mission of saving Mother India and taking it to the glory and greatness that is due to it."* ❑

Workshop on Access to the Disabled

Higher Education for Persons (Disabled) with Special Needs (HEPSN), Gandhigram Rural Institute (GRI), Gandhigram organized a one-day UGC-sponsored Workshop titled 'Access to the Disabled in Higher Education' recently at GRI, Gandhigram. Nearly 45 teachers from various universities such as Tamil University, Thanjavur; Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore; and Mother Teresa Women's University, Kodaikanal; and colleges affiliated to Madurai Kamaraj University, Madurai; Bharathidasan University; Trichy and Bharathiar University, Coimbatore besides participants from the host university participated in the Workshop.

The Workshop was inaugurated by Dr. G Pankajam, Vice Chancellor, GRI. In her inaugural address, Dr. Pankajam underlined the fact that the disabled are differently abled and insisted that integrated education which aims at bringing the disabled into the mainstream should be the objective of our educational system. She also urged the participants to take steps to transform their respective campuses into disabled-friendly ones.

A session titled 'Interacting with Disabled Students' was chaired by Dr. S Prabhakar Immanuel, Director, Holy Cross Service Society, Trichy in which he clarified the subtle but crucial differences between impairment, disability and handicap and emphasized that disability need not be a handicap. Dr. Immanuel suggested a few positive and useful steps and means to interact with the disabled students in classrooms. He urged the participants to take care to bring the disabled into the mainstream.

Another session titled 'Learning Disabilities' was chaired by Mrs. V Bhuvaneswari, Holy Cross Service Society, Trichy. Mrs. Bhuvaneswari spoke of learning disabilities, especially with reference to languages and mathematics, particularly in the case of those in secondary education, and clarified that those suffering from such disabilities are often misunderstood and branded as dull and incompetent students. These students, she pleaded, need counseling and remedial measures, and insisted that their parents too should be involved in this process. She also touched upon the learning problems the disabled face in tertiary education. Against this backdrop, Dr Immanuel spoke of the research projects undertaken by Holy Cross Service Society, Trichy, and invited research proposals studying the problems and challenges the disabled students in the tertiary sector face with regard to language learning for a collaborative venture.

The participants discussed a package of eleven questions prepared by Dr Immanuel and these questions addressed the needs, privileges and rights of the disabled in general and in the education sector in particular. The participants spoke of the steps, both attitudinally and architecturally, taken by their respective institutions to make their campus a disabled-friendly one. Ms Maida Gonsalvez, Lecturer in French, Fatima College (Autonomous), Madurai, spoke on 'The Problems and Challenges Faced by the Disabled in Higher Education'. Ms Gonsalvez, herself a paraplegic, spoke from her experience, and underlined the problems and challenges this section face, and narrated how empathy, understanding and motivation and a positive environment help the disabled to develop confidence.

The valedictory function was presided over by Dr. P Kanniappan, Registrar, GRI. In his valedictory address, Dr Kanniappan pointed out that the disabled do not need pity or sympathy, but they require empathy and understanding. He also spoke of the alarming percentage of the disabled in our country and cited malnutrition as one of the key factors responsible for this dismal condition. Participants were motivated to do something tangible in the disability sector and to be more concerned and understanding towards the disabled in their respective colleges and universities. Earlier, Dr A Joseph Dorairaj, Coordinator, HEPSN, welcomed the gathering. Dr B Padmanabha Pillai, Placement Officer, HEPSN, proposed a vote of thanks.

IGNOU—RCI Tie-up

The Indira Gandhi National Open University (IGNOU), New Delhi and the Rehabilitation Council of India (RCI), New Delhi have tied up to broad-base the reach of various courses offered by the Council. As part of this effort, the RCI will uplink its several study centers all over the country to satellite by using dynamic communication infrastructure available with IGNOU. The RCI will establish a network of hardware at its recognized study centers that would downlink the

programmes that are required for installation from the IGNOU's modern communication set-up in New Delhi. As a result, students from remote areas who are undertaking or planning to undertake the RCI-approved courses will not only be able to download the multimedia courseware but also get a chance to have interactive learning opportunities with experienced academicians and resource persons from the disability sector.

"We intend to share our experience and knowledge with the trainees from the remote areas of the country and modern communication tools in our study centers are definitely going to be an added advantage," said the RCI Chairman, Major H P S Ahluwalia. The RCI has been focusing relentlessly on far-flung areas of the country where there are maximum number of people with disability. To achieve its objective, the RCI recently introduced courses through the distance mode. While these courses are being pursued by students from across the country, the availability of Information and Communication technology will make it more accessible in the future. The new technology being made available by the IGNOU would make satellite-based teleconferencing with eminent resource persons and experts in the disability sector possible besides institutional and studio support for video/ teleconferencing and a time slot on Gyan Darshan and Gyan Vani for special education programmes.

"In the conventional system, the teachers and the respective faculty are often chosen from the institutions they belong to, whereas through this collaboration the RCI can choose teachers for the disability sector from all over the country. The modern communication infrastructure will not only increase the number of qualified teachers but also improve their quality", Prof. H P Dikshit, Vice Chancellor, IGNOU said.

States that stand to benefit most from this entire process include Delhi, Tamil Nadu, Maharashtra, Andhra Pradesh, Kerala and Karnataka. The RCI is also planning to produce a series of television shows on disability training for Gyan Darshan and Gyan Vani which will be telecast to educate young people about the opportunities available in the disability sector. "The facility will directly benefit more than 3,000 students who are pursuing our courses. They will interact with experts on disability from any part of the country," added Major Ahluwalia.

Virtual Courtroom at GNDU Law School

With a view to augmenting its clinical approach towards the legal studies and imparting practical training to students about the court environment, a virtual courtroom has been setup by the School of Legal Studies being run by Guru Nanak Dev University, Amritsar at its Ladhewali Road Regional Center. The School has become the second educational institution in the country after the National Law College of Bangalore to have its own courtroom. "The virtual courtroom will help law students have multiple experiences as Judge, lawyer, accused and witness in mock courts held by students. The emphasis will be on making them aware of every aspect of law and its practical applications, so that the students may have no difficulty in adjusting to the procession after the completion of studies," said Dr Daljit Singh, Director of the School.

The virtual courtroom, according to Dr. Daljit Singh, will have the usual witness boxes, the podium with a proper chair for the Judge and space for his staff, students in rotation, will be asked to don various mantles and present arguments in various cases. "This will make them learn not only the proper way of taking up a case, but also courtroom etiquettes, that most freshers are not familiar with when they join the profession," said Dr. Daljit Singh.

Stating the reason to go in for the virtual courtroom, Dr Daljit Singh, who was also a member of the Punjab State Legal Services Authority, said that it was an outcome of an observation that most law students failed to settle down in the profession due to a lack of practical training during their studies.

MoU for Diabetes Education Course

Diabetes with its present incidence threatens to spread to over 50 million people in the country in a couple of decades and this calls for urgent education of the masses on prevention, control, management and care of the disease. Keeping this in view the Madras Diabetes Research Foundation, Gopalapuram, signed a memorandum of understanding with the Prince of Wales Hospital, Sydney, Australia, to offer a one-year Postgraduate Certificate in Diabetes Education which would seek to prepare a cadre of people called Certified Diabetes Educators (CDE) for raising awareness of diabetes among the public.

In countries abroad, the CDEs disseminate information on diabetes to the masses, and thus bridge the gap between diabetologists and the people, but in India, formal courses for them were lacking, said Dr. V Mohan, Head, Madras Diabetes Research Foundation, Gopalapuram. The objective of the course is to provide the basic knowledge, skills and attitude

to become a CDE and thus help promote diabetes education in the community and influence social changes in diabetes epidemiology.

Inaugurating the Course, the Health Minister of Tamil Nadu, Sh. S Semmalai said that the State Government proposes to conduct specialty camps for non-communicable diseases at block levels. A high-level committee headed by the Health Secretary was recently formed to draw up a policy framework in controlling and managing diabetes patients in the State. The committee would also go into the question of extending amenities and medical facilities to the diabetics, besides strengthening the existing infrastructure in government hospitals. The Director of Medical Education of Tamil Nadu, Dr. C. Ravindranath, said that the Government was providing insulin for diabetics in the government hospitals free of cost for the poor and at a subsidized cost for others.

Dr. Stephen Colagiuri, Director, Diabetes Service, Prince of Wales Hospital, and Dr. Ruth Colagiuri, Director, Australian Centre for Diabetes Strategies, signed the MoU on behalf of the Australian hospital. They were jointly conferred the MVDSC Gold Medal Oration Award which was given away by Sh. Semmalai. Dr. N. Mayilvahanan, Orthopaedic Surgeon, Madras Medical College, Chennai who was recently conferred the Dr. B C Roy National Award, was felicitated on the occasion.

Workshop on Research Methods in LIS

The Alumni Association of Library and Information Science (AALIS), Bishop Heber College, Tiruchirappalli and the Department of Library, D.J. Academy for Managerial Excellence (DJAME), Coimbatore jointly organized a two-day Workshop on 'Research Methods and Techniques in Library and Information Science' recently at D.J. Academy for Managerial Excellence, Coimbatore. Mr. S. Manikandan, Librarian, DJAME and Coordinator of the Workshop welcomed the gathering. Dr. N Surendra Prasath, Principal, DJAME, Coimbatore presided over the function. In his presidential address, he stressed that research should be realistic, idealistic, meaningful and useful to the society, he briefly explained about various kinds of Research, different methods of Data Collection, and various Statistical Techniques used in Research, etc.

Dr. B S Swaroop Rani, Reader, Department of Library and Information Science, Bishop Heber College, Trichy was the Chief Guest. In her inaugural address, she expressed the importance of research in Library and Information Science. She also noted that the growth of research activities in Library and information Science are becoming more and she gave some valuable tips on Research methods and Techniques to the scholars. Mr. Maruthupandiyan, President of AALIS and Library Trainee, NCSI, Bangalore proposed a vote of thanks. Dr. N Muthaiah, Principal of Sri Ramakrishna Mission Vidyalaya College of Education, Coimbatore and Dr. V. Manichavasagam, Professor of Corporate Secretaryship, Alagappa University, Karaikudi who spoke on the topic 'Research Techniques'and Dr. B S Swaroop Rani were the resource persons of the session 'Research Methods in Library and Information Science.'

The Workshop mainly focused on the application of Research Methods and Statistical Techniques in Library and Information Science and was conducted for the welfare of Library Science professionals. Over 50 Library Science professionals of various institutions from different parts of the State attended the Workshop. The Valedictory Address was delivered by Prof. Manoharan. Mr. J. Mannalan, Librarian, Bishop Heber College, Trichy and Mr. S. Swaminathan, Librarian, Sri Ramakrishna Mission Vidyalaya College of Education, Coimbatore gave the special addresses. Mr. B Manikandan, Librarian, DJAME and Coordinator of the Workshop proposed a vote of thanks.

MTech in Renewable Energy

"Visveswaraiah Technological University (VTU) is contemplating to introduce an MTech Course in Renewable Energy considering the increasing importance of the sector in the wake of energy crisis," announced Prof. K Balaveera Reddy, Vice Chancellor, VTU while speaking at a National Workshop on 'Recent Advances in Renewable Energy Technologies' organized recently by the BNM Institute of Technology, Bangalore and Astra, Bangalore. Prof. Balaveera Reddy said that the University had already introduced several job-oriented post-graduate courses which suited modern day requirements. It has also been offering a subject on renewable energy as an elective in some undergraduate courses.

In a bid to popularize renewable energy and also take this technology to the people, the VTU has decided to make students of engineering colleges to work on renewable energy projects under the community rural scheme. Efforts would be made to collaborate with research and development centers to facilitate transfer of technology, Dr. Reddy said. He stressed the need

for developing cost-effective technologies for tapping non-conventional energy.

Delivering the key-note address, Prof. Roddam Narasimha, Director, National Institute of Advanced Studies (NIAS) said that the renewable energy and nuclear energy were the two options for the country faced with power shortage. But renewable energy was advantageous over nuclear energy as the latter had a risk of accidents besides producing nuclear waste. Renewable energy was not only safe but pollution-free, he observed. He termed the argument that renewable energy was costly as a misconception and stressed the need for considering all other advantages of the renewable energy. He also stressed the need for using genetic engineering to develop suitable bio-mass which can yield more energy.

Mr V V Bhat, Joint Secretary to Union Department of Space, called for developing new life-style to suit environmental needs. This could be achieved by switching over to renewable energy which does not affect environment. He also stated that tapping of solar energy had been thought of during the Vedic ages itself. He quoted a few lines from a book *Amshabhodhini* of Bharadwaja which described the sun and its energy. He said that the book which has been translated from Sanskrit to English and published in 1931 was available in ISRO library, Bangalore. Astra Chairman, Dr. N H Ravindranath observed that unlike fossil fuels, renewable energy resources were distributed equally in all developing countries. BNMIT President Dr B C Rajanna and Secretary, R Narayana Rao Maanay were also present on the occasion.

News from Agricultural Universities

CCSHAU Convocation

The 22nd Convocation of the CCS Haryana Agricultural University, Hisar was held recently. Bharat Ratna Dr. A.P.J. Abdul Kalam, the President of India was the Chief Guest of the occasion. While delivering the Convocation Address he called upon the agricultural universities and research institutions to play an important role by contributing to the Second Green Revolution which would enable India to become a developed nation in the agricultural sector. He said that there was a need to increase the production by using minimum land and water and by adopting advanced technology. He said that according to Mr.C. Subramaniam, Scientist the Second Green Revolution that he envisaged was soil to seed to grain to food to marketing. Elaborating this, he said that there was a need for value addition in the agriculture production. He stressed upon the need to open more food processing units for utilizing the agricultural products and ensuring their marketing in view of the tough competition.

He said that a crusade should be launched from Haryana, to usher in the second green revolution in the country. He said that the celestial message of Gita was delivered on this land by Lord Krishna and the three battles of Panipat were also fought on this very land of Mahabharata. He said that the Haryana Chief Minister, Sh. Om Prakash Chautala had assured him to provide employment to the agriculture graduates and postgraduates, who got degrees in Convocation.

He said that by developing hybrid seed backed by scientific research for increased agriculture production and value addition was the mission of his National Agro Foundation. The Foundation aimed at bringing a million farmers under the scheme. For this Mr. Subramaniam had enlisted top agriculture consultancies and managers and technologists for promoting this foundation. The concepts of his Second Green Revolution included soil characterization, right type of seed selection, suitable fertilizers, water management, farmers training, crop management, food processing and marketing.

He said that the production of cereals needed to be increased from the present 200 million tones to 400 million tones and the production of fruits and vegetable would have to be increased also to improve the financial condition of the farmers. He, however, cautioned that the present 170 million hectares of arable land would have to be brought down to 100 million hectares by 2020 because of the requirement of land for increasing population, greater forestation and environmental preservation activities. The type of technologies needed would be in biotechnology, proper training to the farmers, additional modern equipment for preservation and storage.

While complimenting Mr. C Subramaniam for

being the main architect of the first Green Revolution, Dr. Kalam said that it was a result of the partnership between farmers, agricultural scientists and political visionaries, which would help in boosting the agricultural production. The President also exhorted the research and academic institutions to address the problem of availability of water for specialized agriculture in dry areas. He said that the agricultural technologies and water conservation methodologies should be evolved to help lift the people living below the poverty line. The solutions to this problem just might be beyond agricultural alone, spanning animal husbandry, poultry, agro processing and other related activities like medicinal plants.

Dr. Kalam pointed out that only technology and efficient management could help in increasing the food production by improving existing agricultural practices and above all efficient management of water and fertilizer both inorganic and organic. Biotechnology would also assist in getting pest resistant seeds that would lead to increase in the productivity by about 10 per cent. "In my opinion, plant biotechnology had tremendous potentials to enhance agricultural yield by using seeds that are transgenic resistant to pests and other abiotic stress such as drought and salinity," the President added.

He pointed that several major crop plants, including corn, oilseed canola, soyabean, and cotton, had been engineered with genes that make them resistant to insects, pests or to herbicides, so that farmers can apply the weed killer without fear of wiping out their budding crop. The benefits derived from these varieties include the reduced use of insecticides and herbicides, thus reducing soil and groundwater pollution, and reduced tillage that results in topsoil loss. Also, scientists recently developed a technology to bioengineer salt-tolerant plants by over-expressing a single gene. This development could be applied for sugar cultivation in certain parts of our country where salt content is more in the soil. He said that providing Urban Amenities in Rural Areas (PURA) was another example for creating rural wealth and prosperity. The model envisages a habitat designed to improve the quality of life in rural places and makes special suggestions to remove urban congestion also. Naturally our most demanding urban problem was that of congestion removal and efficient supply of water and effective waste disposal in every locality are paramount civic needs. There was a minimum size below which a habitat was not viable and not competitive with the existing congested city. At the same time, the existing congested city is not economical compared to a new town once a minimum size of expansion is crossed. As against a conventional city, say rectangular in shape and measuring 10 km by 6 km, the model consideis an annular ring-shaped town integrating a minimum eight to ten villages of the same 60 square km area, and the same access distance of 1 km to transport arteries. It needs one and only one transportation route of a distance half that is needed for the rectangular shaped city; so frequency of transportation will be doubled halving the waiting time. It has zero number of junctions and will need only a single level layout. Also, it needs only one route as against eight needed for the rectangular plan, so people will no longer need to change from one line to another to move from any one point to any other. That saves transport time. Further, as all traffic was concentrated into one single route, a high efficiency mass transportation system becomes economical even for a comparatively small population. This cuts costs substantially and is more convenient for the general public. Knowledge powered rural development is an essential need for transforming India into a knowledge power and high bandwidth rural connectivity is the minimum requirement to take education, health care and economic dynamisms to the rural areas. Knowledge society leading to a knowledge super power can prosper and survive only in the environment of economic security and internal security. The nation has to work for transformation into 'developed India'. Road maps on certain areas have been generated where we have to work for. Can we do it?, he questioned.

He said that our agricultural scientists and engineers and our farmers had given us food security. We had to make them feel great in their professions. That needed a system evolution from grain to food products to marketing to take place. He quoted a visionary statement proclaimed in 1911, the 'Song of Humanity' by Sri Aurobindo: "*A time will come when the Indian mind will shake off the darkness that has fallen upon it, cease to think or hold opinions at second and third hand and reassert its right to judge and enquire in a perfect freedom into the meaning of its own culture and tradition*". "With this saintly saying, India has to build its nation with its unique traditions, culture and core competencies," he said.

He said that Haryana, with its high development intensity in agricultural and its economic development status should become the top State in the country. High value agriculture would have to be established in a big way to gain economic advantage over agricultural

products. He pointed out that the environmental factors were pulling the composite ranking of the State down. This showed that there was an excessive use of pesticides and fertilizers and technology has the solution for both, high value agriculture and environmental protection.

He said that CCS Haryana Agricultural University, Hisar has played a vital role in overall agricultural development of the State. Haryana had not only become self-sufficient in food grains but has also emerged as the second largest contributor to the central food reserve. He hoped that Haryana could become number one State in the country by adopting modern agricultural techniques. He said that it was also encouraging that farmers were becoming partners with researchers and students in the development and production of seeds and farming methodologies. "The serious component of the University is indeed the farmer hostel. It means that the University and the State means business in the real sense in agriculture," he added. He congratulated the young graduates and wished that they would grow from strength to serve society at large, specially the weaker sections of the society. The President also conferred Best Teacher Awards upon seven varsisty faculty members, which included Dr. S S Pahuja, Dr. Prem Singh, Dr. Santosh Dhillion, Dr. Ved Pal Singh, Dr. S K Gupta, Dr. Nishi Sethi and Dr. B P S Lather. As many as 21 gold medals were also awarded to graduates for their excellent performance in academic and research pursuits. For Ph.D., Nalini Kataria and Surender Singh received Dr V D Kashyap and Ms. Manju Utreja Memorial Gold Medals. Ravi Anitha and Sangheeta Chahal were awarded Silver Jubilee Gold Medal for women. At masters degree level, Vijay Kumar Munjal, Basavaraj Bagewadi and Deepika Lather were conferred Rajinder Pal Singh Gold Medal, Awanindra Nath and Debtanu received Dr. Ram Dhan Singh Gold Medal and Dr. S D Nijhawan Gold Medal respectively and Ms. Suganthi A. and M. Tamilvanan were awarded Hexamar Foundation Gold Medal.

Earlier, the Haryana Governor and Chancellor of the University, Babu Parmanand gave away degrees and gold medals to the meritorious students of Doctor of Philosophy and Master's Degree. The Chief Minister, Mr. Om Prakash Chautala conferred graduate level gold medals upon Rajni Rani Roy, Mayank S. Amalik, Urvashi Mandal and Ajay Kumar. As many as 669 degrees were awarded which included 133 Ph.D., 392 masters and 144 B.Sc. degrees. While reading out report of the University, Mr. Vinay Kumar highlighted its various activities and achievements and said that the varsity had played a pivotal role in ushering agriculture revolution in the State and was now being recognized as a potential institution by many countries for collaboration in agricultural research. He said that focus was being given on agricultural diversification, enhancing water use efficiency, development of water harvesting technology, integrated pest and nutrient management and utilization of indigenous resources. He said that in the field of agricultural education, rejuvenating teaching interventions had been initiated and technology transfer approaches were being redefined to meet future challenges in agriculture sector. ❑

Medium of Instruction in Higher Education

Consensus on the medium of instruction in higher education is quite unlikely. The reason for disagreement depends on the socio-economic conditions of various countries and regions. In developed eountries, higher education is very expensive, and they generally use the language of the nation as the medium of instruction at all levels. For example, in Germany, German is the medium of instruction; in Russia, Russian is used as the medium of instruction.

In India, in general, higher education is highly subsidised. In most of the cases, a nominal amount is taken from the students, and most of the expenditure on education including salaries of the teaching as well as non-teaching staff is incurred by the govemment. Though the national language in India is Hindi, English is, in general, supposed to be the medium of instruction for higher education. In India, higher education is imparted through (i) Central universities, (ii) State universities, (iii) Deemed universities, and (iv) Institutions of national importance.

In some State universities, besides English, the language of the State is also used as the medium of instruction. On one hand, it is good as the students can grasp easily and properly the instructions issued through their mother-tongue. On the other hand, application of knowledge gained through higher education may not be a local phenomenon, but a national or global one.

From April 1, 2003, India has opened the doors of higher education for the world under the General Agreement on Trade Services (GATS, 1995). Through an article entitled 'Higher Education in India under GATS', by V.K. Patil, Ex- President of AIU, published in the *Employment News*, 12 -18 October 2002, a number of possibilities are given where India can stand in an open-market scenario in higher education. Dr. Patil mentioned that as compared to other nations in Asia and Pacific, Indian universities are at an advantageous position as they are imparting higher education in English medium. It is undoubtedly a plus point as foreign students coming to India would like to get education in English medium, as any local language of the State in India may not be of use for their career. In the open-market scenario, it would be a case of survival of the fittest.

In a large number of colleges—most of them affiliated to State universities, and in some university departments, though English is the language of instruction, particularly in science subjects—the teachers impart education in the local language or in a blend of English and the local language. Those teachers are not going to be affected, even if they do not teach at all, as their salary is guaranteed by the government. However, they are going to play a vicious role in spoiling career of the students. Those students are not being properly trained for using English language, which is essentially needed for their brighter career, because finally they have to go for an open competition at the national/international level. Students also feel comfortable when they are being taught through their mother-tongue. However, it may affect their career. The institutions are the places where students are shaped to face the challenges in future, and to decide the future of the country.

It is quite likely that in the near future, the government may not be in a position to bear the expenditure on higher education, and institutions may be asked to raise funds from their own resources, which undoubtedly would lead to miserable and unforeseen conditions. Hence, it is the right time, if not too late, to feel concerned and to take appropriate measures, including the use of the English language, which can provide good higher education, and our students could stand in the global competition. Nowadays, scarcity of good teachers of Mathematics and Science is being realised in some developed as well as developing countries. India can easily provide good teachers of Mathematics and Science, provided they can impart instructions in English medium.

English medium in higher education would also be helpful in order to keep bilateral relations with foreign countries, as English is a language for communication at the global level. Communication skills undoubtedly enhances confidence in our teachers, scientists and common persons.

Suresh Chandra
School of Physical Sciences
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THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities (Notifications received in AIU during March - April, 2003)

SOCIAL SCIENCES

Anthropology

1. Rana, Lalita. **Hindu istriyon kee sthiti mein parivartan ka samajshastriya adhyayan, san 1900 se ab tak.** (Dr Krishna Lal), Department of Anthropology, Vinoba Bhave University, Hazaribag.

2. Srinivas, Suvvada. **Coping with degrading work: A study of Mehtars in Hyderabad.** (Prof P Venkata Rao), Department of Anthropology, University of Hyderabad, Hyderabad.

Commerce

1. Bandyopadhyay, Pranob Kumar. **The Panchayati Raj system and its impact on socio economic changes: A case study in the District of Birbhum.** (Dr Swapan Kumar Biswas), Department of Commerce, University of Burdwan, Burdwan.

2. Bapaiah, Puppala. **An analytical study of financial investments in agricultural education in India.** (Dr S D Vashistha), Department of Commerce, Maharshi Dayanand University, Rohtak.

3. Bhaskara, B G. **An appraisal of quality of banking services and customer satisfaction: A study of Karnataka based banks.** (Dr T V Narasimha Rao), Department of Commerce, Bangalore University, Bangalore.

4. Bhoiasna, R B. **Agricultural development through cooperative banks: An analytical study of Saurashtra Region.** (Dr Tushar R Hathi), Department of Commerce, Saurashtra University, Rajkot.

5. Borade, Arjun Pandharinath. **An analysis of financial resources of selected district central cooperative banks form Marathwada.** (Dr V S Shitole), Department of Commerce, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

6. Bose, Topas Kumar. **The environment of public enterprises in India: A study of its structure, nature and implications for effective management.** (Prof Amit Kumar Mallik), Department of Commerce, University of Burdwan, Burdwan.

7. Chittawadagi, Mahananda Basappa. **Regional imbalance in the growth of urban cooperative banks in Karnatak: A study.** (Dr G B Naik), Department of Commerce, Karnatak University, Dharwad.

8. Kulbhushan. **Role of tourism in the development of Himachal Pradesh: A case study of Himachal Pradesh Tourism Development Corporation.** Department of Commerce, Himachal Pradesh University, Shimla.

9. Makandar, Nazeerahmed Molongsha. **Financial performance of selected food processing units in Karnataka State.** (Dr R L Hyderabad), Department of Commerce, Karnatak University, Dharwad.

10. Mandeep Kaur. **Product market analysis: A study of passenger cars.** Department of Commerce, Guru Nanak Dev University, Amritsar.

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Economics

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Education

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Journalism

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Law

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Library & Information Science

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Management

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Psychology

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Public Administration

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Social Work

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Desirable: Sound working knowledge of rules and regulations of Central Government/University/R&D Institution relating to accounts/audit, service conditions and related financial matters. Proven leadership qualities, adaptability, flexibility and ability to work in a team.

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Dated 16th June 2003

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2	Science	Mathematics, Statistics, Physics, Chemistry, Bio Chemistry, Botany, Zoology, Marine Biology, Geology.
3	Indian Languages	Tamil, Hindi, Sanskrit, Linguistics.
4	Engineering & Technology	Applied Chemistry (M. Phil only) **Ph.D:** Civil, Structural, Mechanical, Mechanical (Manufacturing), Electrical, Instrumentation, Chemical, Computer Science & Engineering and Pharmacy.
5	Education	Education, Psychology, Physical Education.
6	Fine Arts	**Ph.D**: Music
7	Agriculture	**Ph.D**: Agronomy, Entomology, Plant Pathology, Microbiology, Soil Science and Agricultural Chemistry, Agricultural Botany, Horticulture, Agricultural Economics and Agricultural Extension.
8	Medicine & Dentistry	(**Ph.D** Programmes only)

COST OF APPLICATION Rs. 200/- FOR EACH PROGRAMME

HOW TO APPLY: Application form and prospectus can be obtained from **THE REGISTRAR, ANNAMALAI UNIVERSITY, ANNAMALAINAGAR - 608 002** from **16-06-2003 onwards** on payment of prescribed fee noted above in Person (OR) by sending a Demand Draft obtained on or after 16-06-2003 drawn in favour of **THE REGISTRAR, ANNAMALAI UNIVERSITY, ANNAMALAINAGAR from ANY BANK** payable at **CHENNAI** along with a self addressed stamped Thick Kraft envelope of size 30 cm x 24 cm (stamps affixed to the value of Rs. 40/-) with the name of the Programme for which the application is required should be superscribed boldly on the envelope. The Name of the Programme should be clearly indicated in the requisition letter. The Name and Address of the Candidate and Programme for which application is made should be clearly indicated on the reverse of the Demand Draft also.

ISSUE OF APPLICATIONS IN THE UNIVERSITY CASH COUNTER: ONLY DURING WORKING DAYS. (HOLIDAYS - PUBLIC HOLIDAYS, ALL SATURDAYS AND SUNDAYS).

NOTE: The University will not be held responsible for any Postal Delay. Application received after the due date will not be entertained under any circumstances. Hence, the Candidates are advised to submit their applications well in advance.

Important Dates:

Issue of Application Forms	**16.06.2003**
Last Date for Issue/Receipt of Filled in Application Forms	**14.07.2003**

Reference No.: 1028/K2/Advt.No.10/2003
Annamalainagar
Date: 11.06.2003

Dr. M. RATHINASABAPATHI
REGISTRAR

(02452) 229755; EPABX Lines 223801-223803 Extn. 407, 405, 413
Fax No. 223582; Gram- University

मराठवाडा कृषि विद्यापीठ, परभणी - 439 402 (महाराष्ट्र) भारत
Marathwada Agricultural University
Parbhani-431 402 (Maharashtra) India

NO. APA-539
Date: 16.6.2003

Advertisement No. MAU 3/2003 dated 29.5.2003.

(1) Out of the two posts at Sr. No. 2 of Associate Professor/equivalent in the subject of Agril. Chemistry and Soil Science advertised through the advertisement referred above under open category, one post will be filled in for the subject of Bio-Technology.

The candidate should possess following qualifications for the above post

" Ph.D. in respective subject with Specialization in Molecular Biology/Plant Transgenics/Genetic Engineering/DNA Fingerprinting (for Bio-Technology, basic degree in any branch of Life Science/Agril. Science will be considered) with five years experience in teaching/research or extension education of which two years should be in the cadre of Assistant Professor or its equivalent".

OR

Master's degree in respective subject with Specialization in Molecular Biology/Plant Transgenics/Genetic Engineering/ DNA Fingerprinting (for Bio-Technology, basic degree in any branch of Life Science/Agril. Science will be considered) with seven years experience in teaching/research or extension education of which three years should be in the cadre of Assistant Professor or its equivalent

(2) Out of the two posts at Sr. No. 12 of Assistant Professor/equivalent in the subject of Agril. Botany advertised through the advertisement referred above under open category, one post will be filled in for the subject of Bio-Technology.

The candidate should possess following qualifications for the above post

"Ph.D in respective subject with specialization in Molecular Biology/Plant Tissue Culture/ Genetic Engineering/DMA Fingerprinting" (For Bio-Technology basic degree in any branch of Life Science/Agril. Science will also be considered).

OR

Master's degree in respective subject with specialization in Molecular Biology/Plant Tissue Culture/Genetic Engineering/ DNA Fingerprinting (For Bio-Technology basic degree in any branch of Life Science/Agril. Science will also be considered) with two years experience in teaching, research or extension education.

Age Limit : Age limit as on 2nd July, 2003

For Associate Professor :

Maximum 40 years with five years relaxation for reserved category candidates.

For Assistant Professor:

Maximum 30 years with five years relaxation for reserved category candidates.

- The eligible candidate may apply in the prescribed form which can be obtained from the Comptroller, Marathwada Agricultural University, Parbhani 431 402 (Maharashtra State) at the cost of Rs.350/- (Rupees Three hundred fifty only) for Open and Rs.250/- (Rupees Two hundred fifty only) for reserved category candidates respectively, payable in the form of Demand Draft of Nationalized Bank drawn in the name of the Comptroller, MAU, Parbhani.
- The self addressed envelope (11"x 5") affixing postal stamp of Rs. 05/- may be sent along with form fees for obtaining the form by post.
- Applications duly filled in along with required copies of documents shall be submitted to the Registrar, Marathwada Agricultural University, Parbhani 431 402 **on or before 2nd July 2003 by 17.45 hours.**
- In-service candidates shall necessarily submit their applications through proper channel upto 14th July, 2003. However, they should submit advance copies of application form **on or before 2.7.2003.**
- Candidates from abroad may apply on plain paper giving the details of post applied, their qualification, experience, age etc. However, if such candidates are called for interview, they will have to complete all necessary formalities.
- The candidates will have to attend interview at their own cost.
- All other conditions in the advertisement under reference will remain unchanged.

For details please Visit us: http://mkv2.mah.nic.in

Parbhani
Date: 16.6.2003

REGISTRAR

SARVAJANIK EDUCATION SOCIETY

MTB College Campus, Athwalines
SURAT- 395001

REQUIRES

Requires for Self Financed S. R. LUTHRA INSTITUTE OF MANAGEMENT, SURAT recognized by AICTE and affiliated to South Gujarat University, Surat:

1.	Director:	(ONE POST) Ph.D. degree or a fellowship of IIMS, ICA or ICWA with first class Master's or Bachelor's level degree in Management or other related disciplines. 15 years of experience in Teaching /Industry / Research of which 5 years must be at Professor's level.
2.	Professor:	(ONE POST) Ph.D. degree or a fellowship of IIMS, ICA or ICWA with first class master's degree in Management or any hranch of related Science. 10 years experience in Teaching / Research of which 5 years must be at the level of Assistant Professor. Due weightage to applicants from Industry or Profession.
3.	Assistant Professor:	(TWO POSTS) One in Finance and One in Marketing. Ph.D. degree or a fellowship of IIMS, ICA or ICWA with first class master's degree in Business Management or any other related discipline. 3 years experience in Teaching/Industry/Research or Profession. Due weightage to applicants from Industry or Profession. Preference to those with specialization in entrepreneurial development.

Pay scales and service conditions as per AICTE and South Gujarat University, Surat.

RULES:

Those in employment must apply through proper channel. Apply on prescribed form available from office of Society on payment of Rs. 100 in cash or Rs. 150 for sending the form by post. Attach certified copies of marksheets and certificates. Apply **within 20 days** from publication of this advertisement.

SURAT
Date: 10/06/2003

(Ramesh Oza)
SECRETARY

भारतीय खेल प्राधिकरण
Sports Authority of India
लक्ष्मीबाई राष्ट्रीय शरीरिक शिक्षा महाविद्यालय
LAKSHMIBAI NATIONAL COLLEGE OF PHYSICAL EDUCATION

(P.B. No 3, Kariavattom, Thiruvananthapuram-695 581)

Acad (33)/ 2003 5 5.03

ADMISSION NOTICE

Applications are invited from the eligible candidates for admission for the following courses:-

1 **Bachelor of Physical Education (BPE)- 3 years**
Eligibility : Plus Two or SSLC with CPED (2 years course)
Age : 17- 21 yrs

2 **Master of Physical Education (MPE) - 2yrs**
Eligibility : BPE/BPEd with 50% marks
Age : 20- 25 yrs

3 **Post graduate diploma in Health and Fitness Management (PGDHFM)-1 Year**
Eligibility : BPE/BPES/BPEd
Age : 20-40 yrs

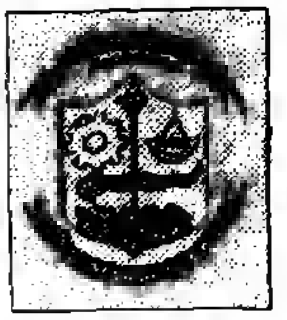
College prospectus and applications form is available in the college office on payment of **Rs 70/-** in person or **Rs 100/-** by post (D.D. in favour of Principal, LNCPE, Thiruvananthapuram payable at State Bank of Travancore, Kariavattom, Thiruvananthapuram-695581.

LAST DATE OF APPLICATION: 5TH JULY 2003

PRINCIPAL

R.V.S. COLLEGE OF ENGINEERING & TECHNOLOGY

R.V.S. NAGAR, DINDIGUL- 624 005
TAMIL NADU
(Estd. 1985)



(Affiliated to Anna University - Approved / Accredited by AICTE / NBA ISO 9001: 2000 Certified Institution)

Applications are invited for the positions of: **PROFESSORS/ASST. PROFESSORS/ LECTURERS** — in Computer/Mechanical/Electronics/Instrumentation/Communication/ Electrical/Civil/Textile/English/Maths/Physics and Chemistry disciplines.

Eligibility/Salary: As per AICTE Norms. EPF, Medical - Insurance, Additional Perks, Research Facilities assured. Retired Persons could also apply. Apply **within 20 days**.

E-mail: rvsinfo@md3.vsnl.net.in **Website: www.rvsgroup.com**
Telephone Nos: 0451-2431344, 2431345 Tele Fax Nos: 04551-227229 & 227230

Dr. K. V. Kuppusamy
CHAIRMAN

AWADHESH PRATAP SINGH UNIVERSITY
REWA (M.P.)
ANNOUNCEMENT FOR ADMISSION 2003-2004

Applications are invited for admission in the following courses offered by the University Teaching Departments.

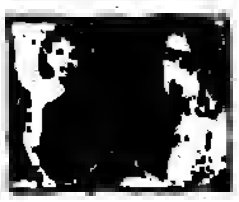
1. **M. Phil** - In Physics, Mathematics, Environmental Biology, Business Economics, Ancient Indian History Culture & Archaeology, Hindi and Policy Research. Eligibility: (except Policy Research). Master's degree with 55% Marks in the subject: for Policy Research. M.A. in any discipline of Social Science with atleast 55% marks.
2. **M. Sc.**- In Chemistry, Mathematics, Physics and Environmental Biology. Eligibility: B.Sc. (10+2+3) with at least 45% Marks in theory papers.
3. **M.A.** - In Business Economics, Ancient Indian History Culture & Archaeology, English, Hindi, Psychology and Russian Language. Eligibility: Bachelor's degree (10+2+3) with atleast 45% marks in theory papers.
4. Part time Certificate, Diploma and Advanced Diploma Courses in Russian Language. Eligibility: Bachelor's degree (10+2+3).
5. Certificate Course in Yoga **(C.C.Y)** and Diploma in Yoga Education **(D.Y. Ed.)**. Eligibility: Bachelor's degree (10+2+3).
6. Post Graduate Diploma in Computer Science & Application **(PGDCA)**. One year full-time professional course.
Eligibility. Bachelor's degree with atleast 50% marks and Mathematics at 10+2 level or its equivalent.

Note: 1. Candidates who have appeared in the qualifying examination are also eligible to apply. 2. The Entrance Test and Viva-Voce for admission in all P.G. Classes would be held on **July 23, 2003** in the Library Building Examination Hall as per details given in the information bulletin. M. Phil. and PGDCA Entrance Test will be held on **August 1, 2003** at 12 noon in the department concerned. 3. The completed application form should be submitted in the concerned departments. 4. Last Date for receiving completed forms for all courses is **July 22, 2003** except **M. Phil** and **PGDCA.**, for which it is **July 31, 2003**. 5. Outstation candidates should enclose a self-addressed unstamped envelope of 28 x 20cms. size. 6. The University has Semester System in M. Phil and PGDCA, other courses are in Annual Examination System. 7. Academic session 2003-2004 would run from **July 2003** to **May 2004**.

How to Apply: Application form along with detailed instructions including eligibility conditions can be obtained from Dean, Students Welfare (D.S.W), A.P.S. University, Rewa Office (except P.G.D.C.A. course form for which form will be available from Computer Science department, A.P.S. University, Rewa) on all working days personally by depositing cash Rs. 200 (for general candidate), Rs. 170/- (for SC/ST/OBC candidate) or through post by a DD of Rs.240/- (for general candidate), Rs.210/- (for SC/ST/OBC candidate), in favour of the **Registrar, A.P.S. University, Rewa.**

Reservation of Seats: As per M.P. Govt. Rules. In case of SC/ST/OBC candidates the eligibility condition of minimum percentage of marks will not be applicable.

Dr. R. S. Pandey
REGISTRAR



PERIYAR MANIAMMAI COLLEGE OF TECHNOLOGY FOR WOMEN

PERIYAR NAGAR, VALLAM-THANJAVUR-613 403.

Tel.: (04362) 266263; Fax: (04362) 266353

E-mail: pmctech@pmctech.edu; Website : www.pmctech.edu

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

ADMISSION NOTICE 2003-2004

Programmes	Duration	Eligibility
Under Graduate		
B.Arch. Architecture	5 Years	A pass in the HSC (Academic) or its equivalent with the minimum marks in the relevant subjects.
B.E.		(or)
Civil Engineering*	4 Years	A pass in any one of the following HSC (Vocational Stream) with Engineering/Technology Vocational subjects and any One or Two of the related subjects like Mathematics, Physics or Chemistry with minimum marks in the relevant subjects.
Computer Science & Engineering*	4 Years	
Electronics & Communication Engineering*	4 Years	
Electrical & Electronics Engineering	4 Years	
B.Tech		
Information Technology	4 Years	
Industrial Bio-Technology	4 Years	
Post Graduate		
M.E Computer & Communications	2Years	B.E./B. Tech (CSE/IT/ECE)
M.E Software Engineering	2 Years	B.E/B.Tech (Computer Science and Engineering/ IT)
M.E Environmental Engineering	2 Years	B.E/B.Tech. in Civil / Chemical/ Geoinformatics Or B.E./B. Tech. (Mech /EEE) with 3 years of relevant experience
MCA Master of Computer Applications *	3 Years	Any degree satisfying the following condition: Must have studied Maths/Statistics/Computer oriented subject as one of a subject.
M.Sc Information Technology	2 Years	Any Degree (with Mathematics or Statistics at Plus Two level/ as an allied Subject/ Major at Degree level) or B.E/B.Tech. (Except Computer Science branch)/AMIE.
M.Sc Software Engineering - (Intergrated Course)	5 Years	Higher Secondary (10+2) with Mathematics/Business Mathematics/Computer Science, as one of the subjects of study or any other Examination recognised as an equivalent thereto. Diploma Holders (10+3 Engineering Stream) from the state Board of Technical Education are also eligible for admission to the second year of the five years course

***Accredited by National Board of Accreditation, AICTE, New Delhi**

Application can be had from the Principal on payment of Rs.300/- (UG Course) Rs. 400/- (PG Course)in person or Rs.350/-(U.G Course) Rs. 450/- (P.G Course) by demand draft payable at Thanjavur in any nationalised bank and in favour of "The Principal, Periyar Maniammai College of Technology for Women" by post. Application form can also be downloaded from our website www.pmctech.edu.

Date of Issue of UG Application: 21.04.2003 onwards **Date of Issue of PG Application: 31.03.2003 onwards**

Salient Feature

- Conducive learning atmosphere with eco-friendly and green environment
- Computerised Digital Library facility. (DELNET/ACM)
- Exclusive Wing for Research and Development
- Facilitating placement through campus interviews
- CISCO Networking Training (Regional Academy) & Autodesk Training
- Hostel with attached bathrooms having 24hrs hot & cold water supply
- Bank, Gift Parlour and Canteen services
- Health Care centre offering Gym, Yoga, Tae-kwon-do, etc.

Well experienced and qualified faculties

- Fully equipped laboratories with latest GIS and GPS technologies
- Special wing offering coaching for competitive exams
- Concurrent Career Development Programme for advanced training
- Captive Power supply by 100 kw bio-mass gasifier operation
- Round the clock Campus Hospital and Internet Facilities.
- Transport facility through college buses.

Dr. N. Ramachandran
PRINCIPAL

Dr. S. Rajaratnam
CORRESPONDENT

Dr. K. Veeramani
CHAIRPERSON

AN ISO 9001 CERTIFIED INSTITUTION

Ph. No: 221331 (O)
Gram : Nagvarsity

NAGALAND UNIVERSITY

Headquarters : Lumami

Camp : Kohima - 797001

No.F.A-12/NU-AC/Pt-1/95-522

Date: 31st May'03

ADMISSION NOTICE

A. Qualified Degree Candidates may apply for admission into Post-Graduate Studies under Nagaland University in the following programmes for the session 2003-04.

1. Master of Arts Programme in i) Economics ii) Education iii) English iv) History & Archaeology v) Political Science vi) Sociology vii) Tenyidie
2. Master of Commerce Programme.
3. Master of Science Programme in i) Botany ii) Chemistry iii) Geography & Resource Management iv) Geology v) Zoology

a) Issue of Prospectus & Admission forms : 20th June to 21st July, 2003.
b) Last date of submission of Admission forms : 25th July, 2003.

The Prospectus and Admission forms will be available on payment of Rs.100/- (Rupees One hundred) only during office hours from the Office of the Registrar, Nagaland University, Kohima and Professor-in-charge, Nagaland University, Lumami.

B. Programme in Agricultural Sciences :

For admission to B.Sc.(Agri) and M.Sc. (Agri) for the session commencing from July, 2003, the Dean, SASRD, Medziphema may be contacted.

The application forms and information brochure can be obtained from the Dean, School of Agricultural Sciences & Rural Development, Nagaland University, Medziphema - 797106 Nagaland on payment of Rs.100/- (Rupees One hundred) only during office hours. The last date of issue of form is 10th July, 2003.

C. PG Diploma in Mass Communication: A separate Admission Notice will be issued shortly.

D. Ph.D. Programme : Ph.D. Programme is available in the following Departments :-

i) Agronomy ii) Animal Production & Management iii) Botany iv) Chemistry v) Commerce vi) Education vii) English viii) Entomology ix) Genetics & Plant Breeding x) Geography & Resource Management xi) Geology xii) History & Archaeology xiii) Horticulture xiv) Plant Pathology xv) Political Science xvi) Rural Development & Planning xvii) Soil Conservation xviii) Zoology.

A candidate having 55% (General) and 50% (SC/ST) may apply in the prescribed form to the Department concerned directly.

(DR. K.K.ZHIMOMI)
REGISTRAR

BENGAL FINE ARTS COLLEGE

A Degree College affiliated to Indira Kala Sangeet Vishwavidyalaya

Chandpara Bazar - 743 245, WEST BENGAL

Ph. / Fax : 03215-250082

ADMISSION NOTIFICATION

Applications are invited for admission to **1st year B.F.A. (Painting / Sculpture) - 4 year Degree course** for the session 2003-2004.

Eligibility : Passing of H.S. (10+2) or its equivalent examination.

Upper age limit (as on 31.7.2003) : 24 Years (27 years for S.C., S.T. and O.B.C.)

Prescribed application form together with information booklet priced at Rs.100/- each are available from the college office between 12.00 a.m. and 6.00 p.m. on all working days (Monday-Friday) from **1st July, 2003** and by Regd. Post on payment of Rs.150/- by Bank Draft in favour of **BENGAL FINE ARTS COLLEGE** payable at **Chandpara.**

Last date of admission : 31st July, 2003.

ESTD - 1986

GOUTHAM COLLEGE OF NURSING

[illegible]

WANTED

Applications are invited for the following posts :

1. **Principal:** Any speciality. M.Sc. (N) / Ph.D. With 03 to 10 years experience (Teaching & administrative)
2. **Professors :** Medical Surgical Nursing, O.B.G. Psychiatry, Paediatrics & Community Health Nursing.
3. **Associate & Assistant Professors :** Medical Surgical Nursing, O.B.G. Psychiatry, Paediatrics & Community Health Nursing.
4. **Lecturers :** Medical Surgical Nursing, O.B.G. Psychiatry, Paediatrics & Community Health Nursing. Qualification: M.Sc. (N) in respective speciality.
5. **Asst. Lecturers :** Qualification: B.Sc. (N) with or with out experience.

SALARY : Negotiable, Preference will be given to experienced candidates. Retired people with good health may also apply. (Age should not attain 65 years)

Note :

1. **Salary in commensurate with the qualification and experience.**
2. **Application should be sent on plain paper giving complete bio-data and all necessary certificates within 15 days of this publication of this notice.**
3. **Interested candidates may walk in the office of the Secretary for personal interaction.**

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INDORE MAHAVIDYALAYA INDORE

(Affiliated to Devi Ahilya University, Indore)

ADMISSION NOTIFICATION FOR SESSION 2003-04

THE INSTITUTE : IMI is one of the pioneer institute in the field of Social Work, IT, Management, Computer Sc.,situated in the prime location of Indore city. The Institute aims at providing quality education to all the masses of society.

THE COURSE : The Institute announces admission to its following courses :

1. **Master of Social Work (MSW)**
2. **Master of Computer Management (MCM) -F/T & P/T**
3. **Master of International Business (MIB)**
4. **Bachelor of Computer Application (BCA)**
5. **Bachelor of Science (B.Sc.)- IT/Comp.Sc.**
6. **Bachelor of Commerce (B.Com.) - Plain & Comp. Appl.**

ELIGIBILITY : For courses 1,2, & 3 - graduation with 2nd class and for courses 4&5-XII with Math & Physics, course 6-XII with commerce/Science

ADMISSION PROCESS : Admission on merit basis. Last date for admission is 25th July 2003.

HOW TO APPLY : The application form and prospectus are available on payment of Rs. 200/- in cash or through crossed demand draft of Rs. 250/- drawn in favour of Director, Indore Mahavidyalaya Indore.

Contact : Director, *Indore Mahavidyalaya Indore,* 164,Muley Tower, M.G. Road, Indore-452001, Tel: 0731- 2545554, 2545854, 2547046 (R)

Email : Indoramahavidyalaya@indiatimes.com

APEEJAY EDUCATION SOCIETY

Sponsored by Renowned Industrial House Apeejay Siya Group

No. 14, Community Centre (Local Shopping Centre)
Masjid Moth, Greater Kailash - II, New Delhi-110 048
Ph. : 2922 8296 / 97 / 98 E-mail : aes@apj.edu

Applications are invited for the posts of

Professors & HODs

in

Computer Science /
Information Technology

for the various Institutions of Higher Education, offering **B.E. (CSE), MCA courses in Delhi, Sohna, Gurgaon and Greater NOIDA.**

Qualification and Salary as per UGC / AICTE grades and allowances as per Govt. rates. Higher salary package as per experience and qualifications.

Send resume by e-mail or by post to Chairman

WANTED

Shri Gajanan Shikshan Sanstha's

SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING

SHEGAON - 444203 DIST. BULDHANA (M.S.)

Ph. No. : (07279) 252116, 252216 Fax : 07265 - 252346, 253602
E-mail : principal@ssgmce.ac.in Website : www.ssgmce.org

Recognised by A.I.C.T.E., Accredited by N.B.A., N. Delhi. NAAC, Bangalore & ISO 9001:2000 Certified by ICS Australia - New Zealand

Applications are invited for the posts of -

PROFESSORS/ ASSISTANT PROFESSORS/ LECTURERS

with attested certificates for - **Mechanical, Computer, Electronics & Electrical Engg. & It.**

Qualifications and Pay-scales are as per AICTE norms. Higher start for deserving candidates with higher qualifications can be considered.

Application should be sent in the name of Principal, SSGMCE, Shegaon, latest by **15th July, 2003.**

Chairman **Principal**

CLASSIFIED ADVERTISEMENTS

SHRI SHARDA BHAVAN EDUCATION SOCIETY

Nanded-5

NEEDS

Principal (FT/Unreserved) in Nanded Pharmacy College, (Non Grant) Nanded. Apply/forward **within 15 days** from the date of publication. **Qualification:** 1) 55% marks at Master's Degree in Pharmaceutical Sciences or its equivalent grade of B in the 7 point scale.* 2) PhD or equivalent published work. 3) Experience of 10/15 years of teaching/ Research in Institution of higher education. Pay as per UGC, State Govt. and SRTMU, Nanded rules. No. TA/DA will be paid. Applications to be addressed to the Secretary, C/o ITM Building, VIP Road, Nanded- 431605. (*Those appointed prior to 27.02.1979 are excluded from 55% Marks condition).

S. B. Chavan
Former Union Minister for Home
PRESIDENT

S. K. Nimbalkar SECRETARY — **S.M. Vadvalkar** PRINCIPAL

Chh. **Shahu Institute of Business Education & Research Trust's**

DINKARRAO K. SHINDE COLLEGE OF EDUCATION

Gadhinglaj, Dist. Kolhapur

(Affiliated to Shivaji University, Kolhapur)

WANTED

Applications are invited from eligible candidates for the following posts.

Sr No.	Designation	Total Posts	Open Posts
A)	**Principal**	1	1
B)	**Lecturer in Education with Science Method**	1FT	1

Note:

1. For the post of Principal, PhD. or equivalent published work and a minimum experience of 10 years (for Principal of Readers grade) or 15 years (for Principal of Professor's grade) of teaching Research in Universities/ Colleges and other Institutions of Higher Education is essenual.
2. Educational Qualifications, Pay Scales and Service Conditions will be as per rules of Shivaji University, Kolhapur. The details regarding educational qualifications, will be supplied to the candidates on request.
3. Those who are already in service should apply through proper channel.
4. Incomplete application will not be entertained.
5. Apply giving full particulars **within a month** from the date of publication of this advertisement to the undersigned.

Place: Gadhinglaj
Date: 07-06-2003

Managing Trustee
SIBER, University Road,
Kolhapur-416004

JAY BHAVANI EDUCATION SOCIETY GIRAVI'S SHIKSHANSHASTRA MAHAVIDYALAYA
Phaltan, Dist. Satara
(Affiliated to Shivaji University, Kolhapur)

WANTED

Applications are invited from eligible candidates for the following posts.

Sr. No.	Designation	Total posts	Open posts	Reserved posts
A)	Principal	1	1	---
B)	Librarian	1	1	---
C)	Lecturer in Education with			
1)	Science Method	2FT	1	@1SC(I)
2)	Geography Method	1FT	1	---

Note: @ indicates that the post is advertised under special Recruitment Drive for filling backlog.

1. For the post of Principal, Ph.D. or equivalent published work and a minimum experience of 10 years (for Principal of Reader's grade) or 15 years (for Principal of Professor's grade) of teaching/Research in Universities/ Colleges and other Institutions of Higher Education is essential.
2. Roman figure in the bracket shows the number of times the post has been advertised.
3. If SC candidate is not available, other candidate will be temporarily appointed for one academic year only. Such appointed candidate will have no claim or legal right on the said post, if SC candidate becomes available during the next year/s.
4. SC candidates who are domiciled outside of Maharashtra State will be treated as open category candidates.
5. SC candidates are advised to send a copy of their application to the Deputy Registrar Special Cell, Shivaji University, Kolhapur-416 004.
6. Educational Qualifications, Pay Scales and Service conditions will be as per rules of Shivaji University, Kolhapur. The details regarding educational qualifications will be supplied to the candidates on request.
7. Those who are already in service should apply through proper channel.
8. Incomplete application will not be entertained.
9. Apply giving full particulars **within a month** from the date of publication of this advertisement to the undersigned.

Place : PHALTAN
Date : 13-06-2003 PRESIDENT

Shri Shivaji Shikshan Prasarak Mandal, Barshi
RAJARSHI SHAHU LAW COLLEGE, BARSHI
DIST- SOLAPUR 413 411
(Affiliated to Shivaji University, Kolhapur)

WANTED

Applications are invited from eligible candidates for the following posts.

Sr. No.	Designation	Total posts	Open posts	Reserved posts
A)	Librarian	1	--	@1ST(IV)
B)	Lecturer in Law	2 FT	--	@1ST(IV)
				@1ST(IV)

Note: @ indicates that the posts are advertised under Special Recruitment Drive.

1) Roman figures in the bracket show the number of times the post have been advertised.
2) The post advertised for II times or more, a relaxation of 5% will be provided from 55% to 50% of the marks at the Masters level for SC/ST category, if candidates with 55% of the marks are not available.
3) If particular reserved candidates are not available, other candidates will be temporarily appointed for one academic year only. Such appointed candidates will have no claim or legal right on the said post, if particular reserved candidates become available during the next years.
4) Reserved candidates who are domiciled out of Maharashtra State will be treated as open category candidates.
5) Reserved candidates are advised to send a copy of their application to the Deputy Registrar, Special Cell, Shivaji University, Kolhapur.
6) Educational Qualifications, Pay Scales and Service Conditions will be as per rules of Shivaji University, Kolhapur. The details regarding educational qualifications will be supplied to the candidates along with application form.
7) Those who are already in service should apply through proper channel.
8) Incomplete application will not be entertained.
9) Apply in a prescribed form giving full particulars **within 15 days** from the date of publication of this advertisement to the undersigned. Prescribed forms can be had from the College Office on payment of Rs. 25/- in cash/D.D./I.P.O./MO.

Place:- BARSHI
Date:-14 June 2003

PRINCIPAL CHAIRMAN
L.M.C

Deccan Education Society's CHINTAMANRAO COLLEGE OF COMMERCE, SANGLI
P.O.Willingdon College, Sangli- 416 415
(Affiliated to Shivaji University, Kolhapur)

WANTED

Applications are invited from eligible candidates for the following posts.

Sr. No.	Designation	Total posts	Reserved posts
	Lecture in		
1.	Statistics	1 FT	@1 SC(VII)
2.	Economics	1FT	@1 ST (IV)
3.	Accountancy	1 FT	@1 ST (IV)

Note: @ indicates that the posts are advertised under Special Recruitment Drive.

1) Roman figures in the bracket show the number of times the post have been advertised.
2) For reserved post of Statistics if SC candidate is not available, then ST candidate will be considered for regular recruitment as per Govt. rules.
3) If particular reserved candidates are not available, other candidates will be temporarily appointed for one academic year only. Such appointed candidates will have no claim or legal right on the said post, if particular reserved candidates become available during the next year/s.
4) Reserved candidates who are domiciled out side of Maharashtra State, will be treated as Open Category candidates.
5) Reserved candidates are advised to send a copy of their application to the Deputy Registrar, Special Cell, Shivaji University, Kolhapur-416 004.
6) One reserved post of Lecturer will be filled in from amongst female candidate. If female candidate is not available the post will be filled in from male candidate of respective category.
7) Educational Qualifications, Pay Scales and Service Conditions will be as per rules of Shivaji University, Kolhapur. The details regarding educational qualifications will be supplied to the candidates on request.
8) Those-who are already in service should apply through proper channel.
9) Incomplete application will not be entertained.
10) Apply giving full particulars **within fifteen days** from the date of publication of this advertisement to the undersignd.

Place: Sangli
Date : 07-06-2003

PRINCIPAL SECRETARY

The University of the South Pacific

The University of the South Pacific. Personnel Office

USP is a multi-modal distance and *flexible learning University offering* unique employment opportunities at various levels. Full details of positions vacant are available at:www.usp.ac.fj/jobs

POSITIONS VACANT

School of Pure and Applied Sciences
Physics Department
Ref. FPH023

The appointee will be expected to take lead in the academic and research programmes of the department, and it is expected that at some point in the future, will accept responsibilities as Head of Department, under the current system of rotating leadship. The appointee will also be expected to teach postgraduate and undergraduate courses and actively promote the Department's research profile.

Applicants must have a PhD in Physics, and tertiary level teaching experience at postgraduate and undergraduate levels. Applicants must also have active research interests in one, or more, of the identified departmental focal areas and demonstrate a high research profile, with a strong publication record in internationally referred journals in his/her area. The appointee should have proven record in consultancies and/or successfully procuring funds for research and development especially in the context of developing countries.

The applicant is also expected to heve experience and interest in course/curriculum development. Experience in multi-modal teaching will be a strong advantage. Candidates with university administrative experience, especially in a developing country will also be advantageous. The candidate should also be able to demonstrate his/her ability to work in multicultural environment, demonstrate sound leadership skills and be willing to work as part of a dynamic team.

The degree courses include a mixture of classical and modern physics, and there are applied courses in computer hardware, communications, electronics, energy, environmental and solid state physics.

Current research interests include applied gamma-ray spectroscopy, communications, electronics, environment, renewable energy and marine physics. The Physics courses are continually modified to meet new demands and the University is strengthening its courses suitable for distance teaching. The current establishment is 12 full-time academic and 6 technical staff. At present there are five Graduate Assistants engaged in postgraduate work. The number of postgraduates is likely to increase in the near future as more studentships become available.

The position is available for a term of three years and may be renewed by mutual agreement.

Salary Range:
Professor F$75 337 to F$81 445 per annum
(Inclusive of 15% Gratuity)

The University may pay an inducement allowance of up to 30% to secure the services of an exceptionally well qualified candidate.

In addition to the above benefits, the University contributes 10% of basic salary to an approved superannuation scheme, provides airfare and relocation costs where appropriate and substantially subsidises housing for eligible candidates.

Two copies of your application, including full curriculum vitae plus certified copies of academic qualifications and transcripts must be forwarded to The Recruitment Manager, The University of the South Pacific, Suva, Fiji. Applicants must request three professional referees to forward signed reports (quoting reference number) to the above address by the closing date. Candidates may send their application by fax: (679) 3303437 while sending originals by mail.

Closing date for applications 18 July 2003

School of Pure and Applied Sciences
Physics Department
Ref. FPH016

The Department of Physics, with focal areas in renewable energy, environment, electronics, communication, nuclear and marine physics, invites application for a three-year appointment with possible renewal.

Applicants must have a PhD in renewable energy or in a related field and substantive teaching, research and publication record in renewable energy.

Salary Range:
Lecturer F$38 686 to F$50 902 per annum
Senior Lecturer F$52 940 to F$61 085 per annum
(Inclusive of 15% Gratuity)

Closing date for applications 11 July 2003.
Enquiries: Dr Mahendra Kumar,
tel: 3212419, 3212430 or 3301648; fax: 3308972; email: kumar_m@usp.ac.fj, website: http://www.usp.ac.fj/physics

Posted at NDPSO on Tuesday/Wednesday every week
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NIZAM'S INSTITUTE OF MEDICAL SCIENCES

(A University established under the State Act)
PUNJAGUTTA, HYDERABAD 500 082, A.P

Rc. No. 8/1/2002/A-5 **Date: 09-06-2003**

NOTIFICATION

Applications are invited from the eligible candidates for the posts of Medical Superintendent and Executive Registrar in the Nizam's Institute of Medical Sciences, Punjagutta, Hyderabad:-

a) MEDICAL SUPERINTENDENT:

Qualifications : MD/MS/MHA

Experience : 10 YEARS teaching/Research experience in a recognised institution in the subject of speciality after obtaining qualifying degree.

b) EXECUTIVE REGISTRAR:

Qualifications & Experience : MBBS with a Post Graduate Degree in any Medical specialty. An academician with 3 years in the field of Medical Sciences not lower in rank that of Asst. Professor.

Age : Below 55 Years (relaxable if candidate is qualified otherwise)

Scale of Pay for a & b posts : Rs. 12,000-375-16,500 + allowances as approved by NIMS.

Preference : Administrative experience of 3 years in any University / Institution.

The application on plain paper neatly written/typed containing Name, address for communication, date of birth, age, qualifications, experience in teaching (category wise)/administrative experience (categorywise) as the case may be, with other related information and supporting documents and a registration fee in the form of DD for Rs. 500/- (Rupees Five hundred only) may be sent to the Director, Nizam's Institute of Medical Sciences, Punjagutta, Hyderabad-500 082. Last date for receipt of applications is **JULY 15, 2003.**

DIRECTOR

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